

The Australasian **MANUFACTURER** SERVING ALL INDUSTRY

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Saturday, July 8, 1950.

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AFTER BUSINESS HOURS

Many Unhappy Returns

By L. T. Sardone.

The views expressed in articles published in this section are those of the contributors and not necessarily those of "The Australasian Manufacturer." They are selected for their interest value, whether controversial or not, and the comments of readers on the subject discussed are always welcomed by the Editor.

ONCE again, it comes upon us—the Government's fiscal birthday—and for the next few weeks we shall be worried with Tax Forms of the S. A. B and Company variety. Growls, protests and headaches there will be aplenty and insults will be hurled at the Federal Treasurer, the Tax Commissioner and his staff.

While we laboriously juggle with a mass of figures and a pile of receipts we may be goaded so far as to contemplate the taking of life—our own or the Commissioner's.

But we won't be setting a precedent—not by a long chalk! For Jules Bourcier of Troisville, France, a few years back, struggled

for weeks with his return—then gave it up as a bad job and hanged himself!

As far back as 1350 people objected to the payment of tax. Think of the sufficiently singular act of self-devotion Lady Godiva made. No one knows whether this good lady really rode naked through Coventry to save her townsfolk from unjust and burdensome taxation, and whether her husband did grant her request, but for centuries the legend has been cherished there in the city where she lived and died.

Then how about Wat Tyler, back in 1381? He objected, perhaps, not so much to taxation, but to its

mode of collection. According to the traditional story, an insult offered by a tax-gatherer to the daughter of Walter the Tyler at Dartford incited Wat so far that he brained the poor fellow, then rose in rebellion.

Some 300 years later John Hampden appears to have gained historical limelight with his objection to Charles the First's imposition of the Ship Money Tax, involving himself in much strife and a heavy fine into the bargain.

Coming to more modern times, Edward Finney of London a few months back, called the Croydon Police to announce: "I just threw four bricks through the window of the Inland Revenue Office. I'm fed up with paying income-tax!" Poor chap, as if that would help. In addition to making him pay his dues and window repairs, it is possible that they contemplated charging him amusement tax!

So don't harbour dark thoughts as you toil. Remember, the Tax Commissioner is fairly well protected anyway and he need have few qualms, for watching over him is Matthew the Apostle, patron saint of tax-collectors.

If you must get nasty, then blame William Pitt, for he it was who in 1799 placed this unpopular brain-child of his—income-tax as we know it—on the Statute Book where, except for repeal from 1816 to 1842, it has remained ever since.

Now, in addition to taxation affecting our wealth, it's affecting our health. Margaret Mead, associate curator of ethnology at the American Museum of Natural History, recently told some 2,000 doctors from 54 nations gathered in London that the world was suffering from "Taxitis." It was a harrowing tale, to say the least.

Margaret, who has made a study of primitive peoples, says that your troubles start down where the tax begins. No taxes—no mental ills, no aches, no pains, no headaches. Taxes may determine whether you are going to be married or stay single; whether you are going to have one child, or ten.

Take the case of the expectant father, she maintains. His interest in his future offspring is more than paternal pride. The infant repre-

sents not only his flesh and blood, but what is just as thick, a fat exemption and a baby bonus. If he's lucky and has twins, then his stake is doubled. If he's unlucky, hundreds of pounds still unborn may be nipped in the bud, as it were.

These little things can't be laughed off. It's Margaret's argument that the stress and strain of worrying about these and other types of taxes can provide one with more (and better) ulcers than worrying about the Hydrogen-Bomb. Truth of the matter, she says, is that only the politicians worry about the bigger issues. It's the little things like trying to fill in three or four pages of your income-tax return which cause the average man to wake up screaming in the night.

Miss Mead says that her studies in such places as Bali, Samoa and the Admiralty Islands show the natives are not nervous. They live natural, placid, care-free lives and suffer from none of the diseases common to our tax-weary civilisation. On pay-day when they draw their weekly bag of clams or whatever it is they use as currency, they can count on the whole bag being theirs.

Their home-life too, is free of the tax troubles we have to endure. Pulling bananas off a tree involves no sales tax. Travelling by shank's pony means no petrol tax. Generally speaking, liquor and tobacco are tax-free. And on the Pacific Ocean, according to latest reports, there is no water tax.

This learned lady maintains that unless we do something about it, those of us who live in the civilised world are slowly being taxed into a state of nervous prostration. It prays on our mind in so many different ways that often we don't realise it, but the plain ordinary cussedness which we attribute to something we ate can be traced all the way back to the Income-Tax Department!

Now let me, just to make your annual fit of the blues complete, quote this fantasy of figures. Both Commonwealth and State Government tax collection figures for 1948-49 were records. They amounted to £27,200,000—an increase of sixteen per cent. or £72,700,000 on the pre-

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vious year. The average per head taxation of the population was £67/12-. Back in 1938-39 it was £17/19/5. Our New Zealand friends in 1948-49 paid out a total of £130,500,000.

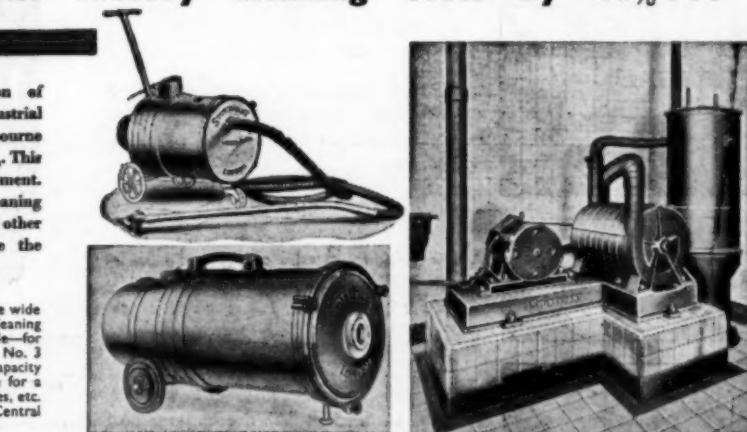
But in the middle of your considerations, don't lose your sense of humour—the only thing perhaps that will get you through this trying period. It was the saving grace of humour which prompted one taxpayer to write into the Department, saying: "I am returning my income-tax assessment, as I think you have made a serious blunder."

Again, your case might not be as bad as the poor fellow who wrote in asking: "What debate do I get for being a married man?" They probably replied that there's usually none - it's mostly monologue.

Then how about the lucky taxpayer in France last year? A Toulon tax-collector, having no small currency, gave our friend two national lottery tickets as change. The tickets won £377. Truly an income tax "return."

So don't let it get you down. Who knows, there may be a pleasant surprise in store for you later in the shape of a nice, big refund.

(Turn to page 39.)



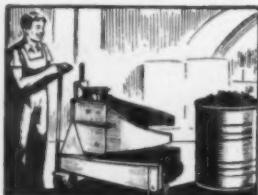
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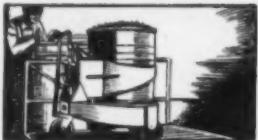


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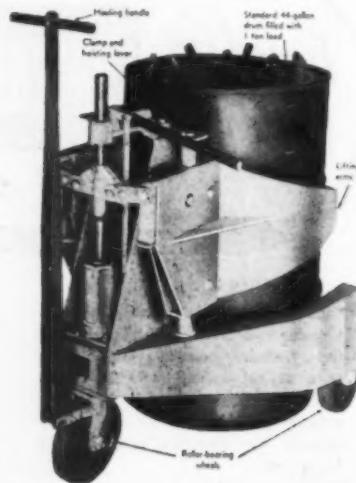
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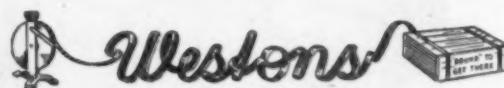
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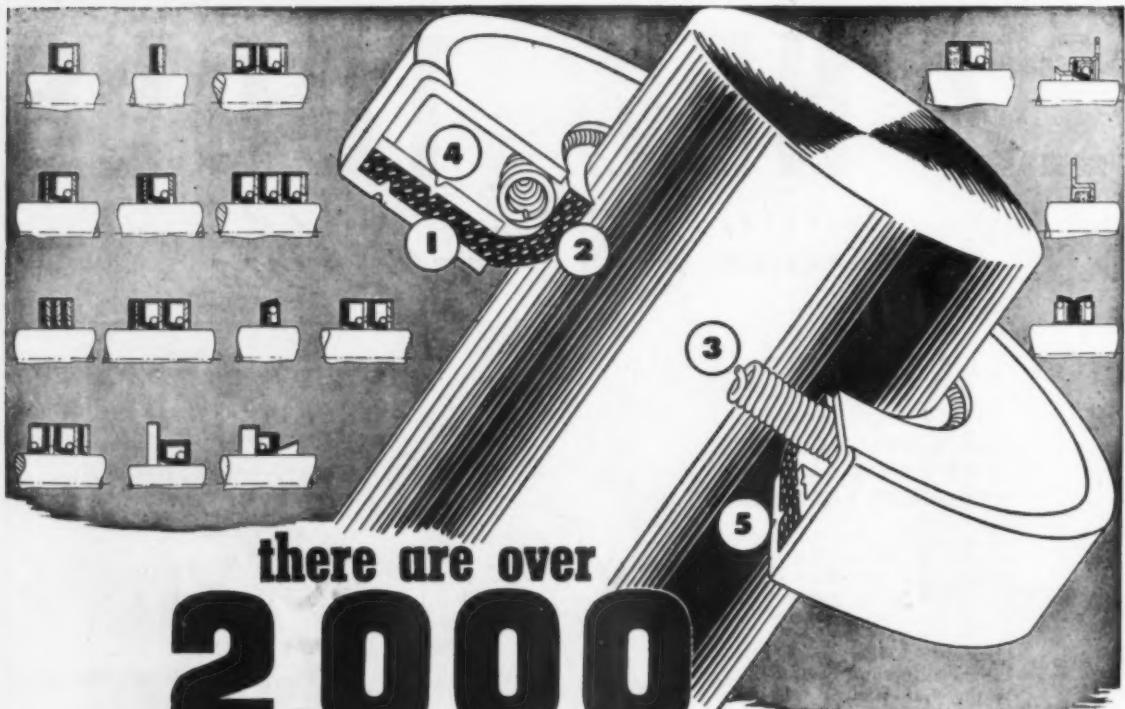


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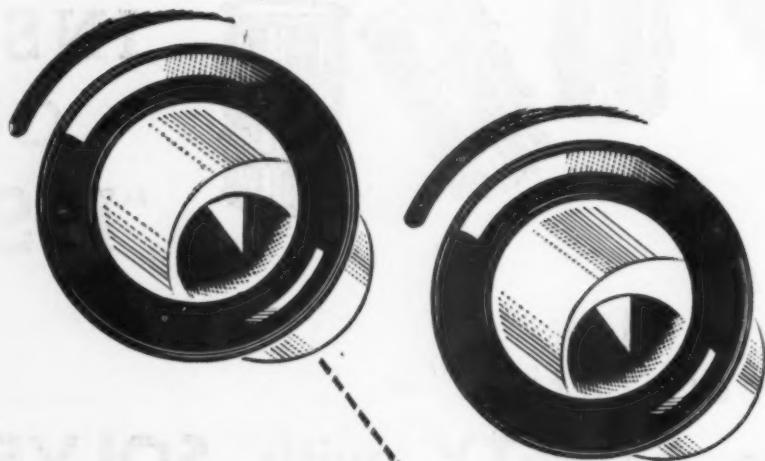
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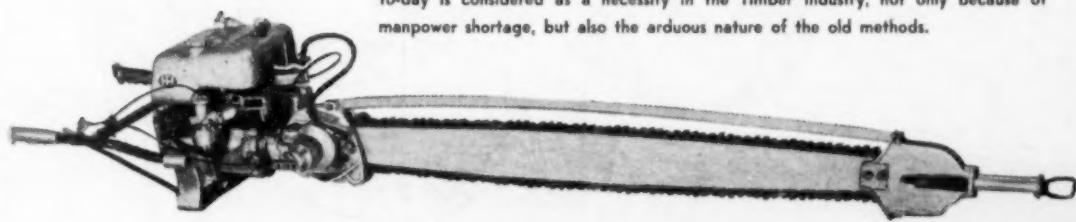
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PAGE FIFTEEN JULY 8, 1950.



Rising Production Costs Their Threat to Manufacturing Enterprises

The manufacturers of Australia are becoming gravely concerned at the steady rise in local production costs. Their concern is the more marked because in the industrial nations overseas, costs are becoming virtually stable. It has been shown, for example, that whereas during the two-year period 1948-1949, Australian hourly labour costs rose by approximately 30 per cent., those in the United Kingdom registered only a 10 per cent. rise, in Canada, 8 per cent., while in the United States there was actually a fall of 14 per cent.

The situation, indeed, is sufficiently disconcerting to impel the Government, management, and the trade-union movement to study thoroughly every aspect of the cost structure in an effort to discover, not only what steps must be taken to halt the upward trend, but also to effect reductions here proportionate to those being effected abroad.

THE question is the more serious in that the manufacturing industries play so pre-eminent a part in Australia's development. The measure of their importance, indeed, may be gleaned from the fact that while in 1939, one in every five Australians employed worked in factories, to-day's ratio is one in every three.

The rapid expansion in manufacturing production which has characterised the last ten years is not only the immediate outcome of war conditions forcing this country to make for itself vast quantities and varieties of goods previously imported from abroad; it is, in addition, an acceleration of the trend which has persisted over the last quarter of a century. It is well that this fact should be borne in mind. Otherwise there is too great an inclination to regard the expansion which has taken place as a mere wartime growth, whereas it is, in solid fact, the inevitable fruition of the seeds of industry sown throughout the last twenty-five years.

It must at the same time be admitted, however, that the post-war period has been rich with opportunities for Australia's industries. Theirs has been the task of meeting the accumulated local demand; of helping to fill overseas needs in certain fields; and of exporting to nearby lands. The world shortage of goods, moreover, has meant very little competition from abroad. The world's sellers' market, in short, has meant for Australia opportunities without parallel in her history.

That period, however, is at an end. Practically all the great manufacturing nations abroad are getting into their regular production stride, with the inevitable result that they will be looking to this country, as well as to others, to buy their manufactured goods.

Herein lies the danger.

How will Australia stand in the altered situation?

If she is to stand firm and is to hold fast to what she has achieved, her first duty must be to grapple with her costs problem.

This cost question was analysed and discussed with particular lucidity in a recent issue of the Institute of Public Affairs' "Review". It is pointed out, for instance, that up to the commencement of 1948, local industries had a considerable cost advantage over countries abroad by comparison with the prewar position. "This," states the "I.P.A. Review", "was largely due to the success of our wage and price pegging policies, a success made easier of achievement by the nature and size of the Australian economy. This cost advantage was maintained throughout 1948, but by the end of the year it had been reduced."

After stressing that during 1949 Australian costs continued to soar, while those of overseas countries either approached normality or registered reductions, the "I.P.A. Review" quotes two highly informative tables, tables which strikingly reveal the trends in local and overseas costs:

Trends in Manufacturing Costs		Aust.	U.K.	U.S.A.	Overseas.
		1937-9	= 100	1939	Canada.
Raw Materials.					
January.	1948	170	275	244	188
"	1949	193	291	226	218
"	1950	225	302	211	218
		28/9	= Oct. 38.		
Hourly Earnings	100	= 100	1939	100
December.	1947	174	190	205	175
March.	1948	199			
December.	1948	208	204	221	196
"	1949	227	211	228	204

Basic cause of the trouble is, of course, the low manhour output of the Australian worker, which output, at least in the metal industries,



Section of Portable Conveyor.

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PORTABLE CONVEYOR SECTIONS

Consisting of standard lengths of conveyor with fixed legs, suitably braced and fitted with castor wheels. Standard height is 2ft. 6in., but special sections can be supplied to suit any requirements. There is an Andell, Reid Conveyor Application for any industry. May we discuss your conveying problems?

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does not come up to that of his opposite in Britain. This fact was emphasised by the Tariff Board when it declared: "Statements of costs of production of the same commodities in the United Kingdom and Australian metal-working factories have frequently shown the average earnings of employees in the United Kingdom to be higher than in Australia; at the same time the labour cost per unit of production is often lower in the United Kingdom. The inference that Australian production per manhour is less than the United Kingdom is inescapable." Add to this the fact that, according to official sources, manhour output in manufacturing in the United States and in Canada has increased by some 20 per cent. during the last ten years, and the seriousness of the Australian situation becomes overwhelmingly evident.

Other contributing factors to high local production costs include the high rate of labour turnover, which is much greater than in Britain and in the United States. Out of the total Australian wages paid, moreover, the amount paid for time not worked is vastly in excess of that paid in countries abroad, Australia's higher percentage being explainable by longer annual holidays, paid sick leave, and more statutory holidays.

It must be pointed out, too, that such advantages as should accrue

to Australian manufacturing industries by reason of local lower-priced coal and steel fail to materialise because of the perennial shortage of these basic essentials through strikes and other avoidable causes.

Management's responsibility, of course, is the exercise of maximum efficiency in the planning and conduct of manufacturing enterprises, plus the provision of the latest plant and equipment—a responsibility whose importance cannot be over-estimated, closely intertwined as it is with every conceivable aspect of production costs.

Urgent as is the need for a thorough awakening by both of Industry's partners to the gravity of the cost issue, there is no reason to doubt that Australia will come to grips with this problem with the same courage, the same tenacity, and the same resourcefulness as she has come to grips with her problems in the past.

Is she not implementing the largest-scale immigration scheme in her history?

Is she not planning vast quantities of "white power" for her industries?

But, back of these gigantic schemes, as well as of all the other schemes she has in hand or is planning, she must keep her eyes, her brains, and her skill concentrated on costs—costs, first, last, and always.

Pithy Jottings of Industry and Industrialists

ANNUAL ISSUE OF "MANUFACTURER."

The 1950 issue of the Annual Number of "The Australasian Manufacturer" is now being delivered to subscribers and is setting forth on its historic task, the task of acquainting the people of this country, and of all the leading countries in Europe, America, and Asia, concerning the production feats being wrought in the factories and workshops of this virile young land in the Southern Seas. Indeed, the publication has come to be held in such high esteem both at home and abroad that its publishers decided to produce a number of copies with a hard cover, in addition to the usual 4-col. cover on art paper. This will give the Annual a permanence and a solidity that will be appreciated by libraries and by the industrial organisations which desire to have it available for both frequent and permanent consultation. This will constitute a strictly limited "de luxe" edition. Copies will come forward at a slightly enhanced figure. Because

of the limited character of the edition, early application for copies is imperatively necessary.

APPOINTMENTS—

NOYES BROS. (MELB.).

Additional appointments have recently been made to the Boards of Directors of the Subsidiary Companies of Noyes Bros. (Melbourne) Ltd. These Boards are now constituted as follows: Ogden Industries Pty. Ltd.—Messrs. E. V. Nixon, W. Sydney Jones, W. E. Wainwright, J. C. Stewart, the former being directors of Noyes Bros. (Melbourne) Ltd., L. C. Scarborough, General Manager of Noyes Bros., F. G. Bishop, Secretary of Noyes Bros., E. G. Ross, Manager of Ogden Industries and Metalex; Metalex Pty. Ltd.—Messrs. E. V. Nixon, W. E. Wainwright, L. C. Scarborough, F. G. Bishop and B. G. Ross.

NATURE AND USE OF PLASTICS.

On the 26th inst. at the Vacuum Oil Company's theatrette, Sydney,

Mr. L. G. Harrison, President, N.S.W. Section of the Plastics Institute of Australia, will inaugurate the long-range plan of his Institute to educate the Australian public to appreciate more fully the many and increasing uses of plastics. His opening address will be supported by a colour film under the caption, "The Nature of Plastics." The object of the plan is to promote more intelligent buying and selling of plastic articles, to instruct as to their more efficient and effective use, thereby bringing about a wider appreciation of their many merits.

Similar courses are planned at an early date for Melbourne and Adelaide.

The scheme should be of far-reaching benefit both to the plastics industries and to the Australian buying public.

DEATH OF S.A. WINE EXECUTIVE.

One of the most prominent men in the wine manufacturing industry in South Australia, Mr. Rudi Buring, of H. Buring &

Sobels Ltd., died recently. He designed many monograms and seals, including that of the H.A. & H.S. Wine Committee; and all Buring & Sobels bottle labels were designed by him.

Mr. Buring had much to do with the designing of the wine kiosk at Wayville Showgrounds and with the presentation of wines there at many shows and exhibitions.

Aged 78, Mr. Buring was a son of Mr. T. G. Hermann Buring, who founded the partnership of Buring & Sobels in 1889. Rudi's brother is Mr. Leo Buring, who in addition to being a director of Buring & Sobels Ltd., conducts the business of Leo Buring Pty. Ltd., Sydney.

Mr. Leonard D. Sobels has been appointed chairman of H. Buring & Sobels Ltd., in succession to Mr. Rudi Buring. The office of managing director lapses. Mr. Clifford Nell, who joined the company in 1910 and has been secretary since 1922 and a director since last year, has been appointed manager in Adelaide. The management at Spring Vale con-

tinued in the hands of Mr. Talbot W. Sobels. Members of the directorate comprise Messrs. Leonard D. Sobels, Leo Buring, Talbot W. Sobels and Larry T. Sobels (winemaker). Mr. Charles Kenny, who has been with the company for 22 years, has been appointed sales manager.

TURBINE GIFT TO SYDNEY UNIVERSITY.

The C. A. Parsons Engineering Company, England, recently celebrated its diamond jubilee in the most exemplary fashion—by presenting to the University of Sydney a 65 h.p. experimental steam turbine valued at £7,500. This was by way of marking the University's centenary celebrations. Thanking the Parsons organisation for their generous gift, the head of the department of mechanical engineering, Professor G. G. McDonald, said it was not only a highly significant presentation, but also the first of its kind received since the initiation of the celebrations. "Unfortunately," he added, "a lack of funds will prevent its installation and use till next year."

Is it too much to hope that another engineering enterprise, imbued with the same high spirit of generosity, will donate to the University sufficient funds to install the turbine at the earliest possible moment?

DIVIDENDS LESS THAN INCENTIVE PAY.

At the recent annual meeting of Howard Bagshaw Ltd., of Adelaide, the Chairman of the Company, Mr. W. J. Barker, stated that incentive payments to employees over and above award rates last year exceeded the amount distributed to shareholders.

HEAD OF B.H.P. ESTATE.

A Victorian estate valued at £278,592 was left by Mr. Harold G. Darling, chairman of Broken Hill Pty. Co. Ltd., who died on January 26.

OVERSEAS VISIT OF PORCELAIN EXECUTIVE.

Mr. H. G. Schofield, Managing Director of Southern Cross Porcelain Co. Pty. Ltd., left by air on Monday, July 3, for an extended business tour overseas, during which he will visit the United States, Canada, the United Kingdom and the continent, returning by air via America.

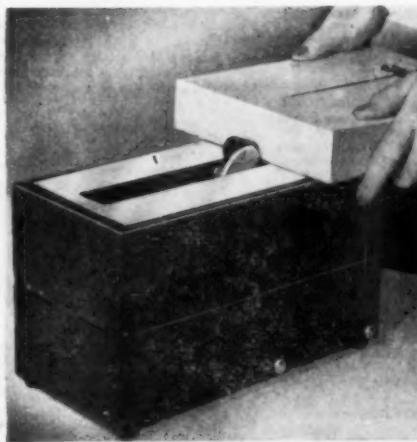
During the trip, which will be of six months' duration, Mr. Schofield will attend the first International Trade Fair at Chicago and the Canadian National Exhibition at Toronto.

BIG DEVELOPMENTAL ERA ENVISAGED.

Speaking at the recent annual meeting of National Reliance Investment Co. Ltd., Melbourne, Mr. Staniforth Ricketson, principal of J. B. Were and Son and chairman of the Commonwealth's largest group of investment companies, expressed the opinion



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AUSTRALIAN DUREX PRODUCTS PTY. LTD., LIDCOMBE, N.S.W.

that under the stimulus of rapidly increasing population and industrial initiative, Australia is embarking on the greatest period of development in her history. "Recently," he continued, "representatives of one of the biggest industrial broking houses in the

United Kingdom stated that most British investors see Australia as the best country in which to make long-term investments, and are willing to back their judgment with a big capital outlay." Mr. Ricketson went on to point out the completion of vast elec-

trical schemes will not only be of national importance, but will also be invaluable in assisting industry to implement with success its expansion plans and help it to keep down costs by the availability of large blocks of relatively cheap power.

Our editorial representative in each State makes regular calls on manufacturers, but if YOU wish to see some particular place, or your business gives publicity, communicate immediately with the Editor, and he will arrange for a representative to call.

Viewing
Industrial
Developments

Around & About the FACTORY

A digest of new factory and plant construction, additions, alterations and improvements, and operating news of Australian industry.

Expansion by McLeod Bolton Two New Factories at Rocklea, Queensland

Two factories in the munitions area, Rocklea, near Brisbane, have been acquired by McLeod Bolton & Co. Pty. Ltd., prominent manufacturers of engine cleaning cotton waste, stockinette, sponge cloths, Dorset cloths, cotton wipers, and similar products.

The first, now in operation, is for the purpose of manufacturing cotton waste, wool waste, flock and garnetted materials, scoured cleaning cloth, mops, etc., and the second, in which machinery is at present being installed, will manufacture stockinette, pork cloth, beef cloth, mutton cloth, etc.

Two interesting features of this move were mentioned by Mr. S. F. Morris, manager for N.S.W. and Queensland, when announcing the proposed expansion. They are (1) that the company is the first of its kind to commence

manufacturing in Queensland, and (2) that beef cloth, previously imported, will be manufactured for the first time in Australia at one of the factories.

Company policy is that the new factories will use all available Queensland cotton, cotton spinning materials, and other local materials applicable to the machines that are installed or are being installed there.

Registered office in Brisbane is c/o Feez Ruthning & Co., solicitors; head office is at 22-26 Mandible Street, Alexandria, N.S.W., and any enquiries should be forwarded to the latter address.

McLeod Bolton & Co. Pty. Ltd. are to be congratulated on this progressive move, in which they are showing their confidence in the industrial future of Queensland in a practical manner.

Simmonds Elastic Stop Nuts Wide Application in Industry

Marketed in Australia by the sole licensees, Simmonds Products Pty. Ltd., 357 Exhibition Street, Melbourne, the Simmonds Elastic Stop Nut is finding a wide variety of applications in industry.

Locking unsupported in any position, and capable of being used over and over again, this nut is available in all standard types and sizes and is particularly valuable on moving or stationary machinery, or wherever vibration is present which is likely to loosen the ordinary nut.

Consisting essentially of a standard hexagon nut with its height slightly increased to incorporate a special fibrocollar, the Simmonds Elastic Stop Nut depends upon this collar for its peculiar characteristics.

Having an internal diameter slightly less than the diameter of the bolt for which the nut is made, this collar is not initially threaded and before the bolt reaches this collar the nut has every property of the standard type, play between threads being to standard tolerances.

When the bolt passes through the threaded portion of the Simmonds Elastic Stop Nut and reaches the special collar, however, further advance is resisted and in overcoming this resistance the nut is forced away from the bolt head until the sides of the thread are in close contact.

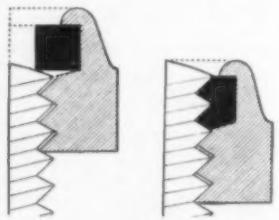
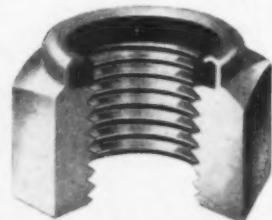
The force distributes itself as a pressure on the side of the bolt thread which will normally carry the load when the nut is drawn home. This pressure results in heavy friction between the sides of the thread in contact, and a very considerable anti-rotational force is exerted to prevent the nut from moving under vibration.

The bolt makes its own thread through the fibre collar, the collar being designed with special elastic qualities so that no fibre chips are removed when it engages the bolt threads. Pressure between the collar and the bolt further increases the anti-rotational characteristics of the nut.

Throughout the world many millions of Simmonds Elastic Stop

Nuts are used by production and maintenance engineers who require a one-piece self-locking nut which positively locks unsupported and Light, A.N.C. Regular and A.N.C.

Light standard threads over a wide range of sizes. Also available is the Type Q Clinch Nut for B.A., B.S.F., B.S.W. and American threads.



(Left): Cutaway view of Simmonds Elastic Stop Nut. (Right): These diagrams show how heavy friction is exerted between the load-carrying sides of the threads after the bolt has passed through the collar.

yet is readily adjustable or removable.

Supplied in Type P (Ordinary Hexagon) and Type T (Thin Hexagon) sizes, Simmonds Elastic Stop Nuts are made in B.A., B.S.F., B.S.P., B.S.W. New and Old Standard, A.N.F. Regular, A.N.F.

Made also for standard Metric Threads, Simmonds Elastic Stop Nuts are supplied to specified tolerances. Full lists of sizes, types and tolerances are available on application to Simmonds Products Pty. Ltd., 357 Exhibition Street, Melbourne.

Low Frequency Induction Furnaces

Manufactured Under Licence by Allmet Industries Pty. Ltd.

The introduction of the low frequency metal melting furnace has spelt outstanding advantages to the engineering world. For, in the first place, it has vastly reduced the number of reject castings, with a consequent increase in the production of quality castings, and, in the second, its lower operating costs mean higher profits.

In this special field, the Lindberg Engineering Company, Chicago, U.S.A., world-famed makers of heat treatment and metal melting furnaces, have made industrial history. For they pioneered the manufacture of the low frequency induction furnace and developed a horizontal channel furnace.

They have, in addition, made history in Australia. For they negotiated a licence with Allmet Industries Pty. Ltd., Botany, New South Wales, under which their low frequency induction furnace is

being manufactured within the Commonwealth.

The "Allmet-Lindberg" double chamber low frequency induction furnace possesses the following important advantages:—

- (1) It permits charging cold metal in the melting chamber without disturbing temperature conditions in the lading or pouring chamber—the "Allmet-Lindberg" in other words, is the equivalent of a combined melting and holding furnace.
- (2) Its double chamber construction simplifies remelting metal, in case of freeze-up, due to power failure or other causes.
- (3) It confines impurities from the scrap metal to the charging chamber. This means

(Turn to page 20.)



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"SABOTEUR"*

"I'm Dust . . . I throw dust in your eyes all along the production line . . . grit in your machine bearings . . . ruin your high gloss finishes . . . cause absenteeism through illness, land you with claims for a variety of industrial diseases. Yes, I'm the ally of all the won't works and I may be comfortably installed in YOUR factory."



AIR CONTROL EQUIPMENT knows all the answers to this problem no matter what form it takes, and will eliminate dust from the atmosphere in your production plant. This will step up your employee efficiency and output.

DUST AND DIRT ARE DEADLY!
Safeguard NOW with

**AIR
CONTROL**



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FIGURE NO. 1

JOHN BRONZE GLOBE VALVE
For Saturated STEAM
at 150 lbs. per sq. inch,
and WATER, OIL or AIR
at 250 lbs. per sq. inch.

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Fittings for use with
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(Continued from page 18)
that only clean metal from
beneath the surface can pass
to the ladling or pouring
chamber.

(4) Automatic flushing action
through the horizontal melt-
ing channels eliminates chan-
nel build-up and main-
tenance.

The Allmet-Lindberg organisa-
tion has published a brochure

which fully describes their A2-
chamber low frequency induction
furnace. A copy will be despatched
immediately to those requesting it.
The plant's engineers, moreover,
who have a wide and valuable ex-
perience in the manufacture of this
specialty apparatus, will be glad to
furnish full particulars of its per-
formance and of its adaptability
to differing circumstances and
differing operations.

Inexpensive Quality Lathe

For Industrial or Workshop Use

Excellent reports have been re-
ceived on the fine performance of
the "Qualos 4" Junior lathe, which
is in use in industrial plants
throughout Australia, in New Zea-
land, South Africa, and various
other countries abroad.

Manufactured in Australia and
distributed by Qualos Sales Pty.
Ltd., 89-101 Lothian Street, North
Melbourne, the Qualos Junior lathe
is designed to meet the demand for
a small lathe in industrial plants.
Suitable for a multitude of simple
operations required in industry, this
lathe has been produced at a price
which makes it a worthwhile pro-
position for conversion to special
applications or for use in the small
garage, farm and home workshop.

Made from modern wartime
tested materials which lend them-
selves to precision finished compo-
nents, it combines the advantages
of plastics of high impact material
capable of withstanding both shock
and hard wear and ensuring
smooth, silent running; die casting
of latest high tensile material with
non-fatigue qualities; and special
alloy iron casings made in the
Qualos foundry, the outcome of
years of experience in the manu-
facture of castings for high quality
lathe.

To obtain maximum rigidity, the
head and bed of the lathe are cast
integrally, with provision for vee
belt drive from underneath, behind
or above. This feature, although

entailing difficulties of production,
was considered important enough
to warrant the manufacture of
special equipment to enable pre-
cision boring of headstock in line
with the bed.

The main spindle is fitted with
tapered Timkin roller bearings ad-
justable for wear, while the saddle
is guided by the well-known and
successful "narrow guide" prin-
ciple. The cross slide is made with
T slots to serve as a boring or
milling table. With the use of an
angle plate a multitude of milling,
drilling and other operations can
be performed, and ease of opera-
tion in every respect has been pro-
vided.

The machine has eight spindle
speeds, four in direct drive and
four in back gear. The back gear,
when in mesh, is held in position
with a keeper which makes it im-
possible for it to come out of
mesh and so cause damage. A
tumbler reverse gear is provided
for cutting right or left hand
threads.

Easy to handle and simple to
change, the plastic change wheels
are made of high impact material.
Ensuring noiseless running, they
are plainly marked with numbers
of teeth. The Apron is a complete
die casting, carrying steel racking
gears and a long-wearing plastic
half-nut.

All slides are of ample propor-
tions and carry adjustable gibs.

The top slide has three positions on the cross slide, giving the lathe greater capacity for turning large work in the gap. The swivel pin of the top slide can be located in any one of the three T slots and lined up with the centre line marked on the cross slide. The centre line also acts as the zero line for the top slide graduation.

The countershaft required varies according to the type of drive used. For driving from overhead or from a line shaft, a fast and loose pulley type is needed. For driving from underneath, a motor drive type countershaft is needed. Either type is suitable for driving from behind. The appropriate countershaft to suit the type of drive that will be employed is supplied with the lathe.

All machines, which are thoroughly tested before leaving the factory, are supplied complete with face plate, catch plate, centres, countershaft, and change wheels.

Full details are available from Qualos Sales Pty. Ltd., 89-101 Lothian Street, North Melbourne, Victoria.

Mechanised Tester for Weathering

As rain and sunshine have deleterious mechanical and/or chemical effects on textiles, paints, varnishes and similar finishes, rubber products, printing inks, and so on, manufacturers frequently submit products of these kinds to trial by the elements. In the past, these weathering tests, conducted in the open air, have wasted time and labour, owing to weather's notorious uncertainty, and the need to record hours of sunshine, etc.

This unsatisfactory situation has been remedied, with the evolution of a device that, in effect, produces any given weather conditions continuously at will inside a drum.

Sunshine is simulated by light of high actinic value from a carbon arc lamp, rain by a spray of distilled water. In practice, the weatherer works as follows: The drum is opened, and on each of the three tiers provided, up to 45 test pieces (paint panels, cloth strips, or whatever) are suspended. The 250 volt lamp is lowered inside, and the drum closed. Connections are made with the separate cabinet which houses the air compressor powering the spray mechanism, and the water supply. A small electric motor is started, and the drum revolves. The test pieces are subjected to water from a nozzle during 30 deg. - 60 deg. of the rotation, and to light the intensity of which is automatically varied. As the speed of the motor, and the amount of spray can be adjusted, any weather conditions can be stimulated. Operation is very easy: the arc lamp runs for 16 hours without attention, and the mounting on which the drum revolves has an outlet for spent water. [2498].



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6. Ensures constant product-quality by automatic control.



This revolutionary Birlec development, which is protected by patents, is of the utmost importance to the malleable industry.

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Agents: ADELAIDE—Unbeheun & Johnstone Ltd.; PERTH—Eagle & Globe Steel Co. Ltd.; BRISBANE—Alfred Snosell, Anthon Pty. Ltd.; WELLINGTON, N.Z.—H. P. Wrigley, G.P.O. Box 1136.

THERE'S A BIRLEC FURNACE FOR *every* HEAT TREATMENT AND MELTING PROCESS



YOU WANT TO KNOW . . . and the editors will gladly tell you . . . more about the inventions, materials, and processes mentioned on this page. Write to Box 1687, G.P.O., SYDNEY, enclosing a stamped, self-addressed envelope.

New Applications of Ultrasonics in Industry

Commercial applications of ultrasonics to industrial processes, the possibilities of which in chemical and metallurgical operations are important, are brought nearer by the development of the new low frequency magnetostrictive generator, illustrated.

The first of its kind, the generator considerably widens the scope which was offered by the

striction generator overcomes this difficulty.

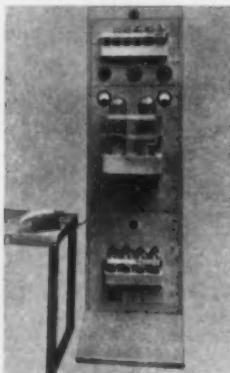
Standard generators so far have powers of 1 kW or less, and are intended primarily for experimental use, but there appears to be no limitation to the ultrasonic power that may be produced by generators of this class.

The low frequency ultrasonic generator consists of a main unit (a driving oscillator, power amplifier and low voltage d.c. power supply, with monitoring and check meters) and the transducer unit (a stack of nickel laminations wound with a common coil for excitation and polarisation). The amplifier, which provides the source of power for the transducer, is basically similar to that used effectively in public address equipment, and delivers a maximum output of 1 kW over a frequency range of 10 kc. to 25 kc.

The industrial suitability of the equipment is associated almost entirely with the design of the magnetostrictive transducer. The insulation of this is such that the whole unit may be immersed in conductive liquids without fear of damage or electrical shock. In practice, the transducer can quite easily be clamped against the side of the treatment bath. Alternatively, it can be fitted in a pipe junction, enabling one liquid to be treated as it flows over the actuating face. More compact and giving higher power outputs than previous transducers of the rod type, it can readily be produced to serve individual requirements. With simple cooling arrangements, a loading of about 5 W per sq. cm. can normally be used.

The three equipments available now are: 1 kW, weight 448 lb.; 500 W, weight 432 lb.; and 250 W, weight 364 lb. All are 69 in. high by 20½ in. wide by 23 in. deep.

Reviewing some of the likely



The tray mounted on the transducer (left) contains two normally immiscible liquids of which an emulsion can be made by the ultrasonic effect.

first commercial high frequency quartz crystal generator, which the company introduced earlier in the year for laboratory use.

That generator is proving its value in ultrasonics research, especially in the treatment of extremely fine particles and bacteria, but the limitation of its power to 500 W precludes its successful use in production processes. The new magneto-

uses of the new equipment, the maker notes that it offers scope for work in the metallurgical field in the mixing of powdered and molten metals in alloy production. It is possible that the equipment could also be used for speeding up the process of solidification in molten tin and aluminium, and for the tinning of aluminium and similar metals.

Emulsification of a number of liquids, and the precipitation or dispersion of particles in suspension are further possibilities of ultrasonics. A certain amount of success has already been achieved in cleansing and washing applications, by which can be produced a much higher degree of cleaning. [2494].

New Process Cuts Tooling Costs in Metalforming

Details of a new process for pressworking metals, reputed to cut metalforming costs as much as 50 per cent, have recently been released.

The process adapts hydraulic presses to form sheetmetal parts at high speeds, to precision tolerances and with reduced tooling costs.

The unit (a set of precision controls) modifies standard hydraulic presses so they'll apply pressures to metal between the dies with infinite variations from zero to capacity. The variation is directly correlated to the stroke position of the press.

In other words, any desired pressure pattern can be obtained, and geared to the shape of the part to be formed.

This control is said to eliminate wrinkles in parts. No power source is required other than that supplied by the press.

It is claimed that complex sheet-metal parts involving drawing, shrinking, and stretching can be made at rates up to 120 an hour, to tolerances of 0.002 inches. Size is limited only by press capacity.

Many comparable pieces formed with rubber in conventional hydraulic presses — particularly flanged parts — often require as much as 15 minutes of benchwork to hammer wrinkles out. The process may be used to

shear as well as form in the same operation without steel dies or expensive auxiliary devices. Other advantages cited are:—

1. Deeper draws than are possible with conventional methods.
2. Elimination of hand finishing.



Metalforming process adapts hydraulic presses to form sheet-metal parts faster, with higher quality, cheaper dies.

3. Various materials and thicknesses can be formed with little or no change in tooling.

4. Wall thickness remains practically uniform on the finished part.

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6. Unit can be used for hot forming. [2499].



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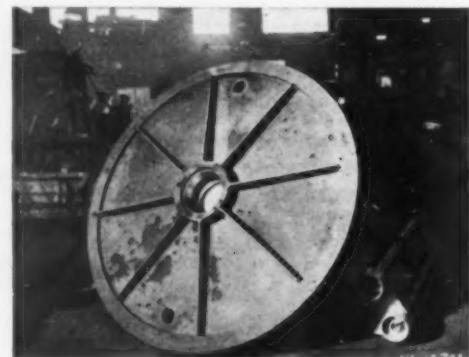
All Welded Sheave is Cheaper and Lighter

Improved operating performance and a reduced manufacturing cost are two elements of machine design difficult to achieve at the same time with present material shortages and generally increasing costs.

At an overseas works, this dual objective is being accomplished in the manufacture of head frames for mining and tunnelling operations through the use of welded design. Faced with a difficulty in securing cast iron sheaves, the organisation mentioned is designing and making a welded steel sheave that is not only 60 per cent. lighter and 68 per cent.

sheave. The sheave carries a load of 30 tons. The cost of the steel fabricated sheave is £112 without shaft and bearing, as compared with the cost of £359 for the cast iron.

In addition to reduced weight and reduced cost, the arc welded sheave has several advantages which reflect in its operation and performance. The danger of breakage, the most common failure in cast iron, is eliminated. The problem of loose spokes, a frequent trouble in the bicycle type sheave, is also eliminated. Another source of maintenance expense is done away with by



A 60-inch diameter welded steel head frame sheave that is 68 per cent. cheaper and 60 per cent. lighter than the cast iron type sheave previously used.

cheaper than the cast iron one previously used, but also is safer, longer lasting and eliminates the maintenance work normally needed with the casting.

One type of sheave redesigned is illustrated on this page. This is a 60-inch diameter sheave for use with a 1-inch steel cable, operating at 75 revolutions per minute or a hoisting speed of 200 feet per minute.

The welded steel sheave is made from 3-inch by 3-inch bar stock rolled into a ring, 1-inch flame cut web plates with 3-inch ribbing, and a cast steel hub. The pieces are first rolled and cut, then assembled and tack welded together. No jigs or fixtures for holding the work are used, as only small quantity lots are made at one time. After all pieces are tacked, the sheave is finish welded as follows: A 1-inch strainer bead is run completely around the rim which is then welded all around with a 1/16-inch weld. A 1-inch diameter Lincoln "Fleetweld No. 7" electrode is used. A 3/16-inch weld is made joining the rib to the web and a 1/8-inch weld is used around the hub.

The finished weight of the sheave without shaft and bearing is 1,000 pounds, which is 60 per cent. less than the cast iron

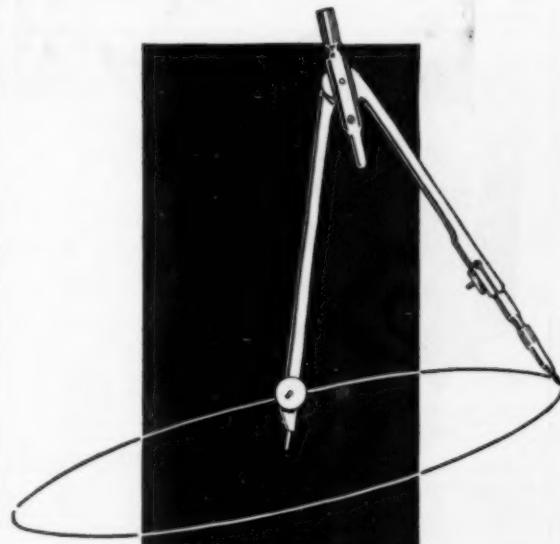
the absence in the steel sheave of any liners, nuts or washers in the cable groove. Smoother operation is also achieved by the welded design. Since the sheave is turned after it is welded, the alignment and balance are perfect. There is consistency of material throughout the sheave. This also contributes, in addition to better balance, to a factor of safety in the steel of at least five times greater than that obtained by the cast iron. [2491].

Testing the Weld

An interesting test has recently been carried out to prove that welded polythene pipe will withstand extremely rough usage. Two lengths of 3 in. diameter polythene tubing, extruded by the company, were welded together and one end was clamped in a vice. The tubing was then bent at the welded joint, first to right-angles and then completely in half. After the tube was straightened the weld was found to be undamaged and completely serviceable.

It was necessary for this test to be carried out nine times before any damage resulted to the weld, thus demonstrating most effectively the strength of the join. [2374].

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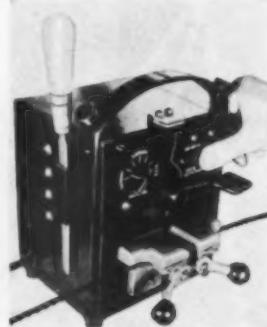
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New Automatic Welder for Saw Blades

A new portable, automatic saw blade welder for owners of bandsawing machines is announced. Weighing only 25 pounds, it permits on-the-spot welding and annealing of saw blades up to $\frac{1}{2}$ in. in width. With this welder anyone can make consistently smooth, strong welds in joining saw blades to fit any size machine. It eliminates brazing and the usual delay in repairing broken bands. Bandsawing machines equipped with this new

jaw for welding blade widths varying from $\frac{1}{2}$ in. to 1 in. A push-button switch controls correct amount of heat for annealing operations. The welder carrying handle is also a holding fixture provided with clamps so that welding flash can be removed in dressing the joint with a hand file. A thickness gauge below this holding fixture is used to test proper blade thickness at the weld.

For accessory equipment, a blade squaring shear and etching pencil are available. The blade squaring shear, easily mounted on the welder, provides square cuts for perfect butting of saw ends. The etching pencil attached to the welder offers a simple way to mark tools, dies, parts and templates. [2493].



This saw blade welder eliminates delay in repairs.

welder permit internal sawing operations as the blade can be re-welded at the machine after threading through the work.

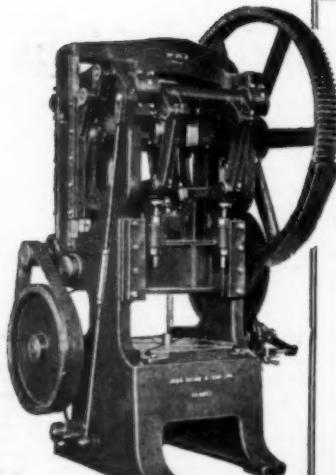
This compact welder is designed and constructed to make it a handy, efficient welding unit that is simple to use. It measures 7 in. x 8 in. x $10\frac{1}{2}$ in. high and is provided with a 6 ft. rubber covered cord to plug into any 110 or 220 Volt, 50 or 60 cycle line.

Its welded steel case is rust-proof. All controls are clearly marked and easy to operate. Quick, accurate alignment of blade ends is made possible by the cam operated jaws. A weld selector automatically provides correct spring tension to welding

Die Castings in an Automatic Record Changer

An automatic record changer has recently been introduced which will handle records of 7, 10 and 12 in. diameter with either of two different sizes of centre spindle openings. The records, moreover, may be run at speeds of $33\frac{1}{3}$, 45, or 78 r.p.m. Zinc base die castings are extensively employed in its construction. In all, 11 such castings are required, and the majority are of complex form and must be produced to close tolerances, the most exacting being the master cam.

This component is cast with accurate gear teeth, and the various cam tracks must be held to a tolerance of ± 0.002 in. The tracks provide three different paths for a sweep lever stud depending upon the speed of the record which is being played. The sweep lever is an integral part of the tone arm, and any movement of the stud in its track is reflected in a corresponding movement of the tone arm head and needle. [2495].



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Manufacture of Gaskets, Seals and Packings

Melbourne Firm's Progressive Development

Prior to the War, large supplies of gaskets and a number of various types of packing for new machines, or for replacement on stationary or automotive units, were imported from overseas. With overseas supplies becoming difficult to obtain during the War, there arose great opportunities for Australian manufacture and in 1942 Associated Power Seals Pty. Ltd. was formed and commenced production at 200 Bay Street, Melbourne.

As the quality and competitive prices of the local product became more widely known, the demand soon began to exceed the output of this factory, and a second factory was established at Collingwood, Victoria, to help fill the rapidly expanding needs and to extend production to cover such specialised fields as aviation.

WORKING in close liaison with other manufacturing organisations, Associated Power Seals Pty. Ltd., of Melbourne, has made a major contribution towards the establishment of new enterprises in this country—particularly in the automotive and industrial fields.

Among the many products of the two factories, probably the most important is the range of cylinder head gaskets and copper and asbestos gaskets made to order for almost every type of internal combustion engine. Another sphere where attention to detail and specifications is essential is the production of various metal shims.

Marketed by nation-wide motor wholesale and retail organisations, a large percentage of the cylinder head, manifold, sump and valve cover gaskets used in Australia are made by this Company—both as initial equipment and for replacements supplied to authorised distributors of well-known English and American cars, trucks, and tractors.

Of similar application are the many gaskets made which are especially resistant to hot oil, acids, or alkalis. Individually designed for the particular liquid, gas, or special conditions which they must withstand, these are made from such diverse materials as felt, Bakelite, paper, celluloid, plain or compressed

asbestos—or asbestos and copper combined.

Where very high temperatures obtain, steel mesh is frequently incorporated in compressed as-

the use of components which may be more expensive initially, but which lead to greater economy in the long run by an extension of the useful life of the gasket.



A section of the presses in operation at the Associated Power Seals Factory.

beatos, while synthetic rubber and cork combinations are often used for joints where hot oil contacts the gasket when in use. Different qualities of materials in asbestos, fibre, and felt are available according to the conditions which must be withstood.

Where conditions are less rigorous, it is often possible to make considerable savings in the type of material used—while more exacting requirements necessitate

With experience gained in manufacturing for every type of industrial need, Associated Power Seals are able to offer technical advice on every phase of this problem.

In addition to the large range of gaskets and packings made for the automotive industry, the manufacture of cork carburetor floats for motor cycles offers an interesting departure.

Not directly connected with the

Automotive Industry, but essential to its existence, nevertheless, is the large range of gaskets and packings produced for the major petrol companies. Made of materials capable of withstanding the action of petrol for long periods, these are used for pipe connections ranging from major installations down to street bowers.

A more recent enterprise has been the entry into the complex field of aircraft industry requirements. Supplying a large proportion of Australian gasket and packing requirements for Pratt and Whitney engines fitted to the well-known Douglas DC3 aircraft, Associated Power Seals also manufacture replacements for Skymasters and Convairs, as well as the needs of a number of Government Departments.

All products of the aviation branch are made to conform to DCA and AIF specifications, the importance of which is readily apparent when it is realised that a plane may be "grounded", or worse, a crash can occur, because of one defective washer in a fuel line. All materials in this branch are stored under special security precautions.

A careful analysis by experts of each application assures clients that the correct material for each individual requirement is used in manufacture. Included in this range are gaskets and packing especially suitable to withstand the action of refrigerant gases under high pressure and over a wide range of temperatures.

(Turn to page 30.)



Drilling holes in Gasket Die.



Die section of the Collingwood factory of Associated Power Seals.

New Equipment for Industry

Europe Can Help Us Over Dollar Crisis

(By Noel Spence, Engineering Manager, Electronic Industries Imports Pty. Ltd.)

The author of this article is the engineering manager of Electronic Industries Imports Pty. Ltd., of Chapel Street, South Yarra (Vic.). Mr. Spence in a 70,000 mile business tour by air visited France, Germany (Eastern and Western Zones), Sweden, Czechoslovakia, the United Kingdom and the United States.

He visited more than 90 factories and discussed with the men running them the problems they are facing and the prospects they have of supplying goods for the Australian market.

Mr. Spence mainly interested himself in the production and availability of machinery. As this article shows, he is a keen observer, and what he has to say about the production position in Europe will be of particular interest to Australian firms which have been unable to get the new equipment they want because of dollar restrictions.

DON'T let the dollar crisis bluff you. If you're a manufacturer looking for machinery overseas, there are soft currency countries which probably can give you what you want at reasonable prices and on quick delivery.

This is what I've been telling my business friends and associates since returning from my overseas tour. My trip convinced me that there are great opportunities for trade with several soft currency countries — countries which are capable of meeting some of our most urgent machinery requirements without delay.

These countries are France, Czechoslovakia, Poland and Italy, all of which have made or are making rapid recovery from the effects of war and are now clamouring to interest other countries in what they produce.

Here is the position as I saw it:-

FRANCE.

France is replacing Germany as the major machinery manufacturer in Europe. She is one of the few countries in the world to-day whose exports exceed her imports.

We can get almost anything from France in the machinery line that under other conditions we might look to the United States for. The French are turning out vast quantities of all sorts of wood-working machinery, earth-moving equipment, machine tools, prefabricated homes, motor cars and engines to name only a few items that will be of interest to Australia.

France has recovered from her war wounds in a most remarkable manner, despite her political troubles. Her factories were not as badly damaged during the war as those of most other European countries and her output in many industries already is greater than the pre-war production level.

The chief factor in putting France back on her feet, of course, has been the aid she received from the United States under the Marshall Plan.

Wherever I went in France I found manufacturers were most anxious to do business with Australia. Some of them are even toying with the idea of starting branch factories out here.

At present French prices are slightly higher than English, but their tendency is to fall, not rise.

CZECHOSLOVAKIA.

Czechoslovakia, of course, is now a Communist country, but it is also in the soft currency area. Before the war the Czechs were recognised as the most efficient engineers in the world and they appear to have lost none of their old skills.

All the factories are now under Government control and industry since the rise of the Communists has undergone a vast process of rationalisation.

Competition has been wiped out almost completely. Former trade competitors are now allies, each producing a different instead of a similar range of products. This has led to greater specialisation. And where the rationalisation process has been a success it has allowed larger production runs to be instituted and deliveries to be speeded up.

The workmanship and quality of Czech machines has not declined, mainly I think, because the same managers who ran the factories before the war are, for the most part, still in charge.

As industry has been completely nationalised, naturally there are signs that the administration is top heavy, but fortunately for the Czechs this has not interfered with production. On the contrary, output in many sections of Czech industry is as high as it has ever been.

I was told that as Czechoslovakia is a soft currency area like Australia, there is no difficulty in obtaining export licences. The goods are mostly sent through Baltic ports, Stockholm being perhaps the principal port.

The Czech items most likely to be of interest to the Australian market include motor cars, sewing

machines, wood-working machines, machine tools and heavy electric equipment like transformers, generators and locomotives. In addition to these, of course, there is also a wide range of consumer products available for export such as crystal ware, cut glass, porcelain and so on.

ITALY.

Italy has not recovered from the war with anything like the same speed as France and Czechoslovakia, but she too, being a soft currency nation is likely to be in a position to supply equipment and machines which our manufacturers require.

Italy was badly knocked about during the war and her industrial north, particularly, took heavy punishment. However, a lot of headway has been made in clearing up the damage in the north and there is no doubt that she is well on the road to a new prosperity.

Among the items which Italy could send us are shoe-making machinery, machine tools, and motor cars.

Italian manufacturers with whom I spoke told me that they were looking to the Australian market as an outlet for some of their products. They seemed to regard Australia as offering very good prospects.

A lot of United States capital has been poured into Italy since the end of the war and this undoubtedly accounts for much of Italy's recovery. Among other things U.S. interests are opening up oil refineries.

Prices of Italian machines are still somewhat high, but I think that they may come down in the near future. The quality of Italian light machinery which I inspected was very high. The Italians, however, do not appear to be producing much in the way of heavier machinery.

POLAND.

I cannot speak from personal experience of Poland, but wherever



Mr. Noel Spence.

I went in Europe I heard stories of the recovery that that country appears to be making. I understand that like Czechoslovakia, she too, is likely to be looking to Australia as an outlet for her products. Her level of production is not as high as that of Czechoslovakia, but I was told that already Poland is looking for overseas markets and that her prices were low.

GERMANY.

Perhaps the sorriest sight in Europe is Germany, split into two hostile camps. Berlin still bears many scars from the bombing it received during the war and elsewhere throughout the country there is still much evidence of the damage that was done.

The Western Zone, of course, is in the hard currency area and is therefore not likely to be an important source of supply for Australia, while the dollar crisis lasts. On the other hand the Eastern Zone does not suffer from this particular economic disability and is prepared to accept sterling for its goods.

It is a strange fact that although living conditions in the Western Zone are superior to those in the Eastern Zone, the latter has achieved a greater measure of industrial recovery and is likely to have a greater quantity of goods for export than the West.

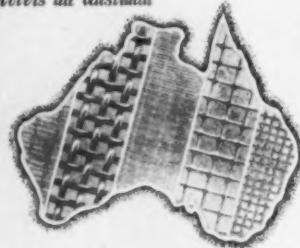
ENGLAND.

In any assessment of sources of supply for the needs of Australian manufacturers, naturally England cannot be overlooked. She will continue to be our major supplier of machinery.

I found England still showing a lot of fight and determined to ride the present economic crisis which faces her. The nation is undoubtedly making great industrial progress, but living conditions for the average Briton are still very grim.

England's factories are working flat out and the goods are pouring off the production line at an ever increasing rate. The fact that many British firms are now making American type machinery under

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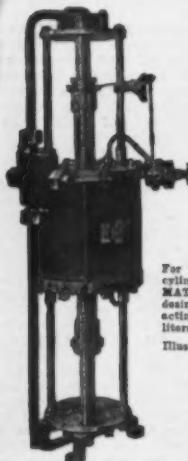
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licence means that we will be able to get at least some of our requirements of this sort of equipment without dollar expenditure.

English prices at the moment are generally lower than European, but I don't expect this position to prevail for much longer, particularly with the prospect of Czechoslovakia and France reducing their prices in the near future.

Gaskets, Seals and Packings

(Continued from page 28.)

Whether orders demand the careful following of complex blueprints or the simple mass production of standard washer-type liquid seals, the same attention to detail and quality of material employed ensures complete satisfaction.

Dies used for cutting gaskets are all made on the premises by experts and a constant check is kept to prevent distortion. In this way industries requiring gaskets made to known specifications, or those with problems still to be solved, can look forward alike to the complete success of the finished product of Associated Power Seals Pty. Ltd.

After Business Hours

(Continued from page 2.)

On top of this, there comes the heartening news from the Federal Treasurer that as from the next financial year — 1950-51 — simpler taxation forms will be available for returns. No doubt we all agree with him in his announcement that the present forms are so involved that a "Philadelphia lawyer could not interpret them." Even the great Professor Einstein said he couldn't understand the U.S. tax forms.

So there's something to feel happy about!

Abolish taxes altogether? Come now, that's really going a little too far. You can't make assertions like that in the light of what wise men have said about taxes in the past. "Taxes," said Cicero, "are the sinews of the State," and Benjamin Franklin perhaps, did not realise how near the truth he was when he said:

"For in this world nothing is certain but death and taxes."

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(Turn to page 53.)

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Enquiries are invited from all trades requiring serviceable clips in modern design. Such enquiries should be addressed to the Company's Sales Engineers in Adelaide, Sydney or Melbourne.

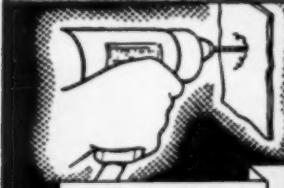
IN SYDNEY: Mr. S. B. Tonkin, 85 Commonwealth Street.

IN MELBOURNE: Mr. C. A. Muller, 355 William Street.

IN ADELAIDE: Carr Fastener Co. of Australia Limited,
Royal Park, Alberton 1, S.A.

Telegraphic Address: "Carrfast," Adelaide

- INSTANTANEOUS • RATTLESNOKE
- ONE PART • NO TOOLS REQUIRED
- INSTALLED WHEN ONLY ONE SURFACE IS ACCESSIBLE • SAVES TIME IN ASSEMBLING OPERATION.



DRILL OR PUNCH HOLE



INSERT FASTENER



SNAP IN TUBING



SNAP IN WIRING HARNESS



STEWART Quality Productions



"Stewart"
Tap Wrenches
No. 104. 0-in., 4-jaw
No. 204. 1-in., 4-jaw
No. 312. 4-in., 2-jaw



BARIN DRILLING MACHINE

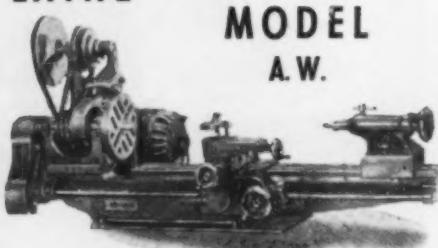
1/4 Capacity

A high-grade machine tool of fine finish and accuracy. The table can be tilted for angle work and revolves on machine faces. The Spindle is mounted on a 2 bearing taper and runs in ball bearings, the six spline spindle giving ample drive, and is independent of the five-step pulley.

A slide spanner attachment allows for tapping and screwing operations or for heavy reaming and spot facing. Supplied for bench or floor mounting with single or three phase motor. Weight packed, 330lb.

ADVANCE LATHE

MODEL
A.W.



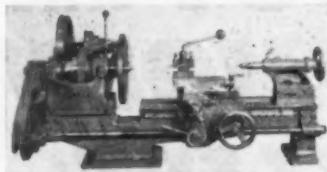
Centre Height: 3in. Distance between Centres: 21in. Swing in Gap: 8in. Hole through Spindle: 17/32in. Micrometer adjustment to cross slide. Adjustable Head and Tail Stock for Taper Boring and Turning, 1/3rd H.P. single phase motor, vertical milling slide, steady and chucks.

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"REXMAN" PRECISION BUILT 4 1/2 INCH. BACK-GEARED, SCREW-CUTTING



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328 Flinders Street
MELBOURNE
Phone: MU 1902

Wingello House, Angel Place
SYDNEY
Phone: BL 2139

(Continued from page 30.)

Zonar Clothing, 92 Edwin Street, Croydon—Clothing.

E. F. F. Engineering Co. 27 Gale Street, Mortlake—Mechanical Engineering.

N. W. Galey Pty. Ltd., 134 Military Road, Neutral Bay—Mechanical Engineering.

A. J. Glasson, cnr. Arncliffe and Illawarra Streets, Arncliffe—Brassfoundry.

Mourlian Engineering Co., 16 James Street, Redfern—Mechanical Engineering.

Miranda Wickerworks, cnr. Bellingarra and Garnet Roads, Miranda—Cane Furniture.

Dixee Cot Manufacturing, 276 Abercrombie Street, Redfern—Furniture and Cabinetmaking.

J. G. & E. Harrison, 183 Moorefields Avenue, Lakemba—Disinfectants.

Harrison Manufacturing Co. Pty. Ltd., 5-7 Alexander Street, Crows Nest—Chemicals.

Merkur Metal Works, 1064 Rocky Point Road, Ramsgate—Gates and Fences.

Apex Soap Products, Buildings 15 and 16, Pyrotechnic Section, Explosives Factory Area, St. Marys—Soap.

Edward Hill & Co., 268 Devonshire Street, Surry Hills—Furniture and Cabinetmaking.

Reform Manufacturing Co., 1 Parker Lane, Haymarket, Sydney—Clothing.

Victory Blinds Co., 378 Great Western Road, Wentworthville—Venetian Blinds.

T. R. Huggins, 102 Avoca Street, Randwick—Tools.

Olympic Metal Industries, 81 Little Walker Street, North Sydney—Mechanical Engineering.

P. L. James & Sons, 120 Pacific Highway, St. Leonards—Joinery.

Johnston & Frogatt, 190 Pittwater Road, Manly—Joinery.

V. Kelly, 47 Wyatt Avenue, Regents Park—Timber and Joinery.

Lambert Engineering Co. Pty. Ltd., 43 Regents Street, Kogarah—Electroplating.

Cedar Antique Reproductions, 61 Acton Street, Hurstville Park—Furniture and Cabinetmaking.

T. E. Lawless Pty. Ltd., 14 Waterloo Road, Punchbowl—Furniture and Cabinetmaking.

Lincoln Leather Goods, 16 Young Street, Sydney—Leather Goods.

Linch Leathers Pty. Ltd., 31 Folkestone Parade, Botany—Leather Goods.

Industrial Joinery Service, 37 Fuze Section, St. Marys—Joinery.

VICTORIA.

Broderick & Summers, rear 477 Gilbert Road, Preston—General Engineering.

Lovitt, H. R., 1a Fallon Street, Brunswick—Engineering.

Rix, W. H., 273 Nepean Highway, Parkdale—Motor Engineering.

Gawthroup, J. & C. 10 Cottage Street, Blackburn—Shirts and Pyjamas.

Travers, Geo. Timber, Hardware Pty. Ltd., Moller Street, East Oakleigh—Joinery.

Frankston Industries Pty. Ltd., Dandenong Road, Frankston—Plastic Mouldings.

Cooper Case Co. Pty. Ltd., New Street, Ringwood—Cases.

Severins, K. & J., Rokewood—Motor Engineers.

Arthur & Barnett, 2a Barkly Street, Malvern—Clothing.

Unsworth, J. 948a Mt. Alexander Road, Essendon—Leather Goods.

Oldfield, F. W., 1036 High Street, Armadale—Picture Frames, etc.

Niven, K. M., 457 North Road, Ormond—Knitwear.

Gerner & Grossbard, 17 Elizabeth Street, Melbourne—Manufacturing Jewellers.

Dobson, Rule & Dyson, cnr. Lt. Smith and Lt. Victoria Streets, Fitzroy—Engineering.

Brand, G. & Son Pty. Ltd., 536-8 North Road, Ormond—Sheet Metal.

Lamont, N. & M., 105 York Street, South Melbourne—Clothing.

Holt, H. S. Pty. Ltd., No. 13 Wool Store, Salmon Street, Port Melbourne—Textile Waste Sorting.

Veitch, L. & R., rear 33 Hawdon Street, Heidelberg—Sheet Metal.

Kennedy, L., Eagle Point Road, Bairnsdale—Tiles and Cement Art.

Holt, W. J. High Street, Eaglehawk—Shoe Tops.

(Turn to page 34.)

MUNDAY'S

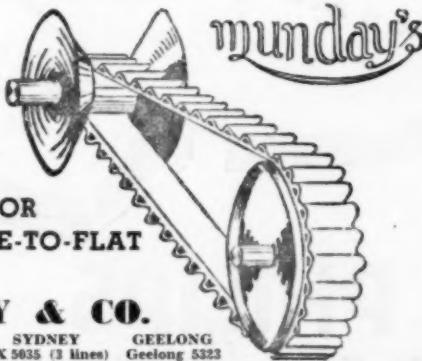
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SPEED DRIVES

"RIPPLE"

LEATHER BELTS FOR
VEE-TO-VEE & VEE-TO-FLAT
ARRANGEMENTS.

JAS. MUNDAY & CO.

MELBOURNE SYDNEY GEELONG
Phones: MU 6015 (4 lines) BX 5635 (2 lines) Geelong 5223

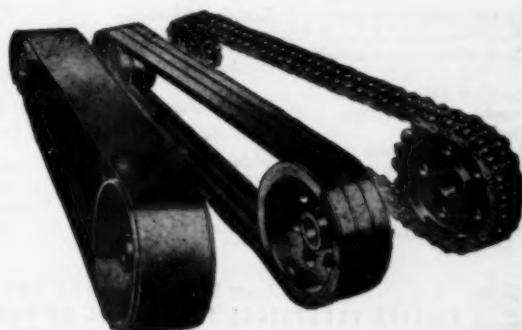


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Mechanical Power TRANSMISSION EQUIPMENT



Flat and V-Rope Drives.
Morse Chain Drives.
Clutches.
G.W. Couplings.
Pulleys.
"Angus" Oil Seals.
Speed Reduction Units.



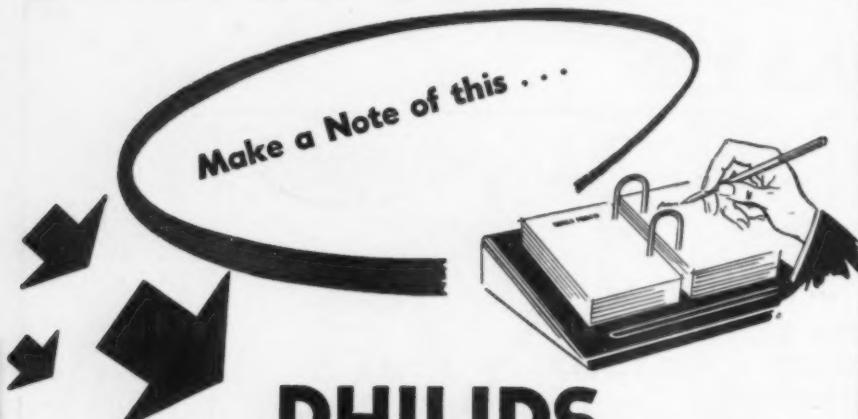
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From the wide range of electronic apparatus offered by Philips you will find at least one piece of equipment that has a specific application to your factory or plant . . . industrial aids that will simplify complex operations . . . reduce working costs . . . increase overall efficiency.

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PHILIPS HOUSE, 69-73 CLARENCE ST., SYDNEY
or to PHILIPS BRANCHES IN MELBOURNE, ADELAIDE, BRISBANE, PERTH

69-69

Industrial Companies and Firms

VICTORIA.

KALSO PAINT & COLOUR
CO. LTD.; to take over K.P. and
C. Co. paint manufacturers, Fitz-

roy. Nominal capital: £100,000.
Directors: A. O. Rettig, E. E.
Davies, C. J. Langley, T. A. Na-
tion, J. Pickering.

AUSTRALIAN ASSEMBLY OF U.K. DIESEL ENGINES?

According to recent cables from London, the United King-

dom Government, through its Finance Corporation for Industry, of which Lord Bruce is chairman, may make capital available to Australia. A statement to this effect was made by Lord Bruce on the occasion of his recent visit to the Perkins Diesel engine works, the inference being



281 Latrobe St., Melbourne. MU 2211.

- Engineers' Machine Tools
- Woodworking Machines
- Portable Electric Tools
- Circular and Band Saws

ALL TYPES SAW REPAIRS

that if money is required to finance the establishment of a Perkins assembly plant in Australia, the Corporation would consider the question. Mr. Richard Perkins, son of the founder of the company, is to visit the Commonwealth at an early date.

Already the company maintains in Australia its own sales and service representatives. A further extension of its activities, such as the establishment of an assembly plant, would be welcomed warmly by the Australian engineering world.

ATOMIC ENERGY FOR INDUSTRY.

The United Kingdom recently made known for the first time the vast strides she is making in the harnessing of atomic energy to industrial needs. For instance, officials of the £50 million atom research station at Harwell told a group of 100 journalists who toured the plant, that a programme is under consideration for the construction of experimental reactors, which supply atomic motive power. The party were shown plans for power units which may revolutionise the history of travel in less than ten years, including diagrams of ships' engines and power stations.

HIGHER EFFICIENCY NEEDED.

Mr. Colin Clark, world-famed economist, said before his recent departure from Brisbane to attend the U.N.E.S.C.O. conference in Paris on vocational education and apprenticeship, that the efficiency of Australian industries competing with imports will "surely tried in the near future. "Australian industry," he added, "can expect increasing competition from Germany and Japan. Demand for Australian primary products from these countries, however, will probably increase. This means that prices for primary products are likely to remain high, but Australian industry will have to become a great deal more efficient." Australian industry is deeply conscious of the need to increase efficiency in every field of production, which objective it is striving continuously to achieve. Its efforts, however, must at all times be supplemented by an adequate measure of protection.

Electric SANDERS and POLISHERS by **SHER**

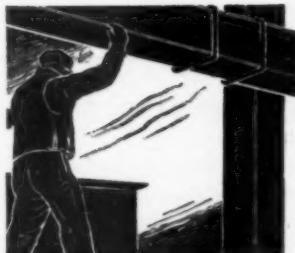
For Sanding, Grinding, Polishing, Brushing, Surfacing, Drilling, in short for all handwork in the factory, workshop or the home there is a Sher Electric Tool which is designed to do the job . . . and do it with greater speed and greater efficiency.

Sher Tools are made in Australia, from tested materials, to the world's highest standards. The proof of their quality is the universal demand for them . . . in New Zealand, N.E.I., India, Singapore, etc. Sher Tools are as well known and as eagerly looked for as in Australia.

*Available from
Leading Distributors in all Capital Cities.*



RED POINT TOOL CO. PTY. LTD., 66 ST. JOHN STREET, PRAHRAN, S.I., VICTORIA, AUSTRALIA



Steel

THOUSANDS
OF TONS

Continuous Regular Shipments

10 GAUGE TO 28 GAUGE SHEETS (Black or Enamelling)

ALSO DEEP DRAWING C.R.C.A.

Steel of the finest quality for almost universal application is available in continuous regular shipments. We can quote all sizes of Reinforcing Rods, Flats, Rounds, Angles, Channels, Plates, Steel Tubing, R.S.J.'s, Galvanised Iron Sheets, Water and Gas Pipes, Wire Netting, Conduit and Wire of all kinds. Available in True British Dimensions.

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PTY. LTD.

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Quantities of 10 tons or over are delivered ex-ships at capital cities.

British Standard Specifications apply and inspection certificates are available with each shipment.

Prices are reasonable.

INQUIRIES FOR PLANT MATERIAL AND AGENCIES

"THE AUSTRALASIAN MANUFACTURER'S" INQUIRY DEPARTMENT

This Inquiry Service is for the use of readers of "The Australasian Manufacturer" who wish to trace suppliers of Plant, Equipment and Materials, and for particulars of agencies offered. Address your inquiry to the Inquiry Department, and give the fullest possible particulars to enable us to put you in touch with the best sources of supply. **INCLUDE A STAMPED SELF-ADDRESSED ENVELOPE WITH YOUR INQUIRY.** It is essential that telephone inquiries be confirmed by letter. No charge is made for Inquiry Services, but normal advertising rates will be charged if agencies are sought by manufacturers' representatives or if goods are offered for sale. For the benefit of new subscribers, inquiries will be published in two or more consecutive issues.

SPECIAL NEW INQUIRIES.

WHEN REPLYING to an Inquiry, please quote the Reference Number and send your reply to the Inquiry Department, "The Australasian Manufacturer," 16 Bond Street, Sydney. **INCLUDE A PLAIN, STAMPED ENVELOPE** so that we can forward your reply to the Inquirer.

HYDRAULIC DRAWING PRESS WANTED: Sydney firm wants to purchase one Hydraulic Drawing Press — Double Action — 400 ton approx. capacity. Approx. platen size, 42 x 51 inches. Daylight, 21 in. Preferably complete with pump and controls. Particulars to Ref. 8212, c/o "The Australasian Manufacturer."

WANTED:—Babcock & Wilcox Water Tube Boilers, complete, one approximately 3,000 Square Feet, one approximately 6,000 Square Feet Heating Surface. Write to Ref. 6577, c/o "The Australasian Manufacturer."

ALUMINUM CASTINGS — AUSTRALIAN PRODUCTION: English firm exporting patent aluminium machines to Australia desires to contact Australian general engineers with first-class aluminium casting, machining and assembling facilities, view to production in Australia. Reply airmail, with brief description of available facilities to Box 145, Gordon House, Farringdon Street, London, E.C.4, England.

PLASTIC MOULDINGS, DIES AND AUTO. LATHE CAPACITY

Specialists in Electrical and Industrial Mouldings. Prompt service.

MASTERCRAFT PLASTICS
72 Parramatta Road, Stanmore, N.S.W. LA 2660, FW 3619.

PLANT AND EQUIPMENT — AGENCIES WANTED: Reputable commercial engineer, excellent connection, wide experience, starting own marketing manufacturing organisation, centred Sydney, wants agencies for Australian produced plant, equipment, and supplies for engineering, building and manufacturing industries. Write to Ref. 8213, c/o "The Australasian Manufacturer."

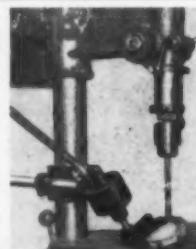
ALUMINUM SHEETS: Merchants or manufacturers in a position to supply the inquirer with 16, 20 and 22 gauge Aluminium Sheets and Circles, are requested to write to Ref. 8214, c/o "The Australasian Manufacturer."

ELECTROSTATIC SPRAYING: Manufacturers specialising in Electrostatic Spraying, are asked to write to Ref. 8215, c/o "The Australasian Manufacturer." The inquirer desires to place an even, tough plastic or synthetic rubber coating on Wire Baskets.

Small Plastics Plant FOR SALE

I x 100 ton Stacey with 10in. Ram Return Springs.
I x 40 ton Plastic Press.
Both operated off I.S.E. Pump.
I x 100 ton Stacey (as other) operated by HYCON Pump and low pressure system.
Dies and other gear.
All complete and in working order.
Replies: "BRAD," c/o Box 16278, G.P.O., Sydney.

MANUFACTURERS! W.A. REPRESENTATION: Are your products represented on W.A. Goldfields? Experienced Agents possessing good connections and credentials are seeking to represent Manufacturers of quality products on the Goldfields, particularly the Gold Mining Industry. Apply "Goldfields", c/o "The Australasian Manufacturer", Box 1687, G.P.O., Sydney.



"DRILLAIR" CLAMP

The Modern Complement of every DRILLING MACHINE
in the Tool Room — for Repetition Work for R. & M.

Holds the job firmly
Quickly set to any height and angle
Simplifies jig design
Prevents accidents

ACTA PTY. LTD.
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'Phone: BW 7431

PLASTIC SHEETS FOR SALE: Sydney firm wishes to dispose of: 548 lbs. 1/16 in. Sheet XXP Dilecto; 75 lbs. 1/16 in. Sheet Natural Paxolin. Best offer accepted. Write to Ref. 8216, c/o "The Australasian Manufacturer."

CLOTHES PEGS, DRAWING PINS AND FURNITURE SPRINGS: Dutch concern wants

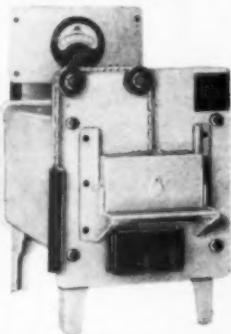
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For Foundry Sands, Suspensions, Emulsions, Bonds Horticultural Sprays and Dips, and Many Other Uses where High Gelling and Emulsifying ARE DESIRED.

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MAGNESIUM OXIDE

Pure Commercial 98.99%
2nd Grade 94.95%

Interstate Representatives:
RAMSAY TREGANOWAN, LTD.
Latrobe Street, MELBOURNE.
CAMPBELL BROS. PTY. LTD.
Bewar Hill, BRISBANE.

to enter into relations with an Australian firm in order to establish a factory producing Clothes Pegs, Pins, Pancourers, Christmas articles, Drawing Pins and Furniture Springs. Machines can be delivered from Holland. Only first class proposals are taken into consideration. Reply to Ref. 8217, c/o "The Australasian Manufacturer."

PATENT ALUMINIUM MACHINES — AUSTRALIAN PRODUCTION WANTED: English firm exporting patent aluminium machines to Australia desires to contact Australian general engineers with first-class aluminium casting, machining and assembling facilities, view production in Australia. Write Ref. 8218, c/o "The Australasian Manufacturer."

PRODUCTION OF ART POTTERY AND DOMESTIC CROCKERY: Overseas firm which specialises in the manufacture of art pottery and domestic crockery wishes to engage in the production of such commodities in Australia and is interested in partnership or other form of business association with a similar existing establishment in this country. Firms interested in this inquiry write to Ref. 8219, c/o "The Australasian Manufacturer."

SPRING EYING MACHINE: If you can supply a Sydney firm with a Spring Eyeing Machine, hand type, suitable for eyeing large springs, approximately 1 in. O.D. x 10 sw.g., write to Ref. 8207, c/o "The Australasian Manufacturer."

FOUNDRY METALLURGIST AND TECHNICIAN—POSITION WANTED: The inquirer who recently arrived from England, seeks a progressive position. Wide experience of analysis, testing, melting furnace control, sand control and general foundry technology in iron and non-ferrous foundries. Write to Ref. 8208, c/o "The Australasian Manufacturer."

ELECTRIC MOTORS FOR SALE: Melbourne manufacturer has for sale a number of new $\frac{1}{2}$ -H.P. Split Phase Motors. 240 V., 1,400 R.P.M., American make. Write Ref. 8209, c/o "The Australasian Manufacturer."

CHILLED IRON ROLLS FOR SALE: Sydney firm has for sale a quantity of high quality Chilled Iron Rolls of American manufacture, 15 in. diameter, 15 $\frac{1}{2}$ in. face. All ground finish. Illustrations and specifications supplied on application to Ref. 8210, c/o "The Australasian Manufacturer."

SURPLUS MATERIAL AVAILABLE: Adelaide manufacturer has the following surplus stock for sale: 10,600 lbs., 6 ft. x 1 ft. x 26 gauge Soft Brass Strip, 2,100 lbs., 6 ft. x 1 ft. x 24 gauge Soft Gliding Metal Strip; 4,600 lbs., 23 in. x 22 gauge Soft Brass Strip; 1,900 lbs., 9/16 in. Aluminium Rod (Turning Quality); 590 lbs. 3/16 in.

CAPACITY REQUIRED

A large and continuous contract is available to Melbourne engineering firms for the manufacture of welded machinery.

Most materials for this work will be supplied. Work involves machining, welding, fitting and spray painting.

For further particulars, apply to:

MOBILE INDUSTRIAL EQUIPMENT PTY. LTD.

252 Swanston St., Melbourne. 'Phones: Cen. 4799, Cen. 2639.



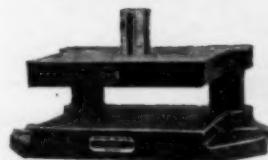
COMPARE THESE PRICES

H.P.	Make.	Speed.	Price.
1	Brook	1,430	£13 16' 0
1	Hebco	1,430	£13 10' 0
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MICROID Self-Lube BEARINGS



MICROID Self-Lube BEARINGS

ENQUIRIES TO :-

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Queensland :-K. H. Dore, Brisbane.
South Aust.—E. Bown, Adelaide.

N.S.W. : J. C. Ludowici & Son Ltd., Sydney
W. Aust. : M. J. Bateman Pty. Ltd., Perth.
Tasmania : R. H. Littler, Launceston.
New Zealand : Carrel & Carrel, Auckland.

Round Steel Rod; also 4 only No. 2 Samson Spray Guns; 2 only Type CH.13.893 De Vilbiss Spray Guns. Write to Ref. 8211, c/o "The Australasian Manufacturer."

AGENT FOR VICTORIA
WANTED: N.S.W. Engineering and Importing Company desires to contact a manufacturers'

Agent to sell well established product with ever increasing sales; alternatively able control Victorian Branch Office on remunerative commission basis. Electrical and steam knowledge essential. Write to Ref. 8201, c/o "The Australasian Manufacturer."

**STEEL TUBING FOR EX-
CHANGE:** Melbourne firm wants in quantity up to 5,000 ft. of $\frac{3}{4}$ in. by 16 gauge solid drawn steel tubing. They will exchange a similar amount of 1 in. by 16 gauge solid drawn steel tubing. Firms interested in this inquiry will be given the name and address of the firm on writ-

**LADDERS, STEPS
and TRESTLES**
of Every Description.
Quality Right — Price
Right.

**Mote Ladders
PTY. LTD.**

Works :
38-44 VICTORIA RD.,
DRUMMOYNE.
Phone: WA 2821
CATALOGUE ON
APPLICATION.

ing to Ref. 8204, c/o "The Australasian Manufacturer."

TRADE WITH VENEZUELA:
An inquiry has been received from an exporting firm located at Caracas, Venezuela, South America, in which they say they desire to contact Australian manufacturers interested in this market. The name of this firm will be supplied on application to Ref. 8205, c/o "The Australasian Manufacturer."

**POWER TAKE OFFS AND
SQUARE TUBING WANTED:**
N.S.W. firm desires to locate a supplier of 4 (only) 90 deg. x $\frac{1}{2}$ in. x 6 Spline Power Take Off and 4 (only) 90 deg. x 11 in. x 6 Spline Power Take Off to suit tractors. They also require 100 ft. 1 in. I.D. Square Tubing. Write to Ref. 8206, c/o "The Australasian Manufacturer."

SPOT WELDER WANTED:
Inquirer wants to purchase one "E.M.F." Spot Welder, 7 to 10 K.V.A. Automatic. New or Second-hand. Write to Ref. 8192, c/o "The Australasian Manufacturer."

**CUPBOARD VENTILATORS,
DRAFT STOPS AND SHOWER
CIRCLES:** The manufacturers of "Inserts" Cupboard Ventilators, "Russack" Draft Stops and C.P. Shower Circles, are requested to write to Ref. 8194, c/o "The Australasian Manufacturer."

NEW REPRESENTATIONS BY MARSHALL AGENCIES.

Marshall Agencies, of Adelaide, announce a new line of pronounced prestige as an addition to this firm's group—namely, the well-known N.S.W. manufacturing concern, Texenco Manufacturing Co., makers of 32 in. and 20 in. band saws; spindle moulders; 6 in. belt sanders; 16 in. saw bench; and pedestal grinders, 12/14 in.

In conjunction with this appointment, Marshall Agencies announce also the introduction of "Lampard" lines. In this connection there are being offered the "Lampard" pillar drill (No. 2 Morse taper spindle), and the "Lampard" spindle moulder which is an improved version of the Wright pattern known throughout the world.

AT LAST! A Portable Spray Paint Unit which is not a toy.

A "REILAX" Unit.

Weight — 42 lbs.



- Will handle all finishing materials.
- Special nozzle for ceilings and floors included.
- Obtainable leading machinery and paint merchants.
- For further information, write to —

SIMPSON AGENCIES PTY. LTD., 34 Little Latrobe Street, Melbourne, Victoria.

Representatives for Victoria and Tasmania

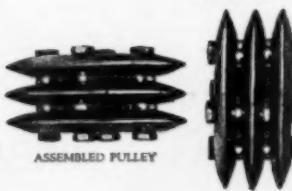
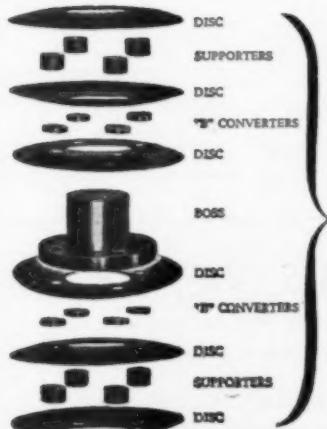
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PATENT 119152/43

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Stocks of bosses always on hand—
Blank or Bored and Keywaved

- One or more grooves, as required.
- Number of grooves can be easily increased or decreased.
- Speedy conversion from one section to another.

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'Phone: *MX 2251.

20th Century Mechanical Exhibition

Opportunity for Australian Manufacturers

Following an Editorial in a recent issue of "The Australasian Manufacturer" giving preliminary details of arrangements being undertaken to hold an Australian Industrial Fair in Sydney in 1952, important news has come from Victoria of plans which are well under way towards organising a really comprehensive Mechanical Exhibition to be held in Melbourne as early as October 12 this year.

To be housed in the centrally situated Exhibition Building, which was the venue of the recent highly successful International Motor Show, the 20th Century Mechanical Exhibition offers an extremely opportune occasion for manufacturers to demonstrate to the buying public the not always sufficiently appreciated achievements of our fast expanding Australian Post-War Secondary Industries. Overseas organisations will also demonstrate goods and equipment manufactured abroad.

IT is now over fifteen years since the Victorian Chamber of Manufactures staged what was considered at that time to be the finest exhibition of secondary industries ever held in Australia, and it is high time that exclusive prominence was once again given in Melbourne to this section of Australian production.

While Australia has long been regarded in the eyes of the world—and by many of her own people—chiefly as a primary producing country, this popular misconception is disproved by the figures of the Commonwealth Statistician. These figures show that the surplus of manufactures over primary products which already existed in the last complete pre-war year of 1938-39 had more than trebled in value last year, while the overall total cash value of manufactured goods for the current year is more than double that of 1938-39, a truly remarkable growth for one decade.

In the face of this trend of increasing development in secondary industries, Royal Agricultural Shows held annually in the capital cities of the Commonwealth have long ceased to be exclusively agricultural in nature, and more and more emphasis has been given of late years to the manufacturing side of local production.

While good work has thus been done in bringing before the public the rapid strides made by Aus-

tralian manufacturers, the accent has naturally remained on agricultural and pastoral affairs and other interests have therefore remained in a subordinate position at these functions—a fact which no doubt has contributed to some extent to the popular underestimation of Australia as an industrial force.

The importance which manufacturers and sellers of manufactured goods overseas attach to opportunities such as will be presented by the 20th Century Mechanical Exhibition to display their products is amply proved by the enthusiastic support given the recent first International Trade Fair held at Toronto, Canada.

Within a month of the initiation of negotiations more than twice the space originally estimated was applied for by Canadian exhibitors alone, while over five hundred manufacturers and producers from all over the world had reserved space to demonstrate their products. Two notable Australian exhibitors to this Exhibition were the Repco group and Frederick L. Cook & Williams Pty. Ltd., manufacturers of "Ring-Grip" electrical accessories.

The organisation of the Fair was in the hands of the Canadian Government Exhibition Commission, assisted by advisory committees comprising representatives of the Canadian Manufacturers' Association, the Canadian Ex-

porters' Association, the Canadian Chambers of Commerce, the Importers and Traders' Association, the Canadian National Exhibition Association, and the Toronto Board of Trade—in short, every section of the Dominion's industrial and commercial life was actively and ably represented.

The forthcoming 20th Century Mechanical Exhibition is also in good hands, being under the Directorship of Mr. Charles D. Jackson, Industrial Engineer, Mr. Ernest E. Blake, Governing Director of Dawn Manufacturing Co. Pty. Ltd., and Mr. Benjamin T. Taylor, Managing Director of Aytom Engineering Instruments, of Melbourne, all men with active industrial experience who have the interests of Australian manufacturers at heart.

With Mr. William Darwin, F.R.G.S., as Organiser and Mr. Charles D. Jackson as his live-wire assistant in charge of bookings, space reservations are already very heavy and have necessitated the taking over of the whole of the Exhibition Building, balcony, and cinema floors—as well as a large section of the grounds for outdoor exhibits under canvas and housed in special buildings.

One of the cinemas with a seating capacity of 300 and up-to-date 16 mm. Talkie Equipment will also be reserved for exhibitors wishing to show films of their products, manufacturing

processes, or items of general interest or sales value.

The Exhibition as a whole has been carefully planned to cater for a wide range of products, processes, and trades, covering such important industries as textiles, leather, and building and household equipment, as well as purely mechanical and engineering activities.

Emphasis has been placed on actual working exhibits, wherever possible, and full facilities are available for the supply of gas, water, and electric power to obtain the maximum amount of public interest and eye-appeal.

By availing themselves of the services of men of the highest technical qualifications and organising ability, the Board of Management is confident of presenting to the Australian public the largest and most attractive exhibition ever held in the Commonwealth.

Already elaborate plans have been laid for a programme of sound publicity carefully balanced with good old-fashioned "ballyhoo" in the nature of a Band Parade through the city streets and other special advertising features prior to a fitting opening ceremony on October 12, 1950.

By appealing in this way to all sections of the public it is confidently expected that there will be something in the Exhibition to attract

(Turn to page 42.)

MINERALS PTY. LTD.

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And 27 Elizabeth Street, Hobart, Tas.

Industrial Earths and Wood Flour Millers.

For all Industries



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MANUFACTURERS ! DISTRIBUTORS !

Show Your Products to the Australian Buying Public

Do you require INCREASED SALES ?

WIDER MARKETS ?

BIGGER TURNOVER ?

GREATER PROFITS ?

ALL of these advantages are available to you through the

20th CENTURY MECHANICAL EXHIBITION

to be held at Exhibition Buildings, Melbourne, from the 12th to the 21st October, 1950

A record public attendance is expected !

BOOK YOUR EXHIBIT SPACE NOW

The 20th Century Mechanical Exhibition Committee includes leading Melbourne
Engineers and Manufacturers

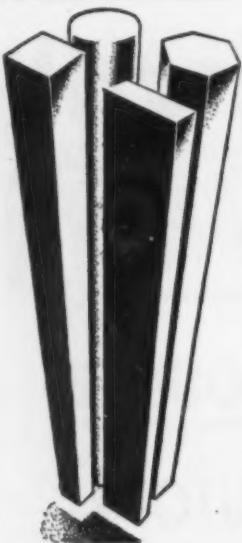
For further particulars, contact

THE SECRETARY, 20th CENTURY MECHANICAL EXHIBITION

1st Floor, Melville House, 52 Collins Street, Melbourne

Phone: Central 3402

(After Hours: JU 1527)



Write for the "MARBRITE" PRICE FOLDER, containing full price lists, specification sheets, tolerance tables, etc.

'MARBRITE' BRIGHT STEELS

"MARBRITE" BRIGHT STEEL is manufactured in completely modern plant, to standard specifications, from specially prepared raw materials.

Metallurgically controlled on a commercial basis, through all processes, "MARBRITE" BRIGHT STEEL can be supplied in a wide range of grades and in sizes and sections to suit most needs of manufacture.

The following classes and grades are standard:

BRIGHT MILD STEEL —

- GRADE 1 — Shafting.
- GRADES 1B, 1A — High Tensile Shafting.
- GRADE 2 — Semi-Freecutting Steel.
- EXTRA SUPER — Freecutting.
- LEADER — Freecutting for specialised purposes.
- GRADE CH2 — Case hardening.

PRECISION GROUND —

Supplied in all "Marbrite" Grades, to Standard or Special Tolerances.

BRIGHT ALLOY STEELS —

- "MARBRITE" L5 — 3 per cent. Nickel — Case Hardening.
- "MARBRITE" Q5 — Nickel Chrome — Case Hardening.
- "MARBRITE" L10 — Nickel Molybdenum — Case Hardening.
- "MARBRITE" Q7 — Nickel Chrome — High Tensile.
- "MARBRITE" R4 — Nickel Chrome Molybdenum — High Tensile.

AIRCRAFT STEELS —

To Standard Specifications

"MARBRITE" Rounds, in Grade CH2 and other suitable grades, can be supplied oversize to provide for grinding, after heat treatment.

Special Sections — A comprehensive range is available against order.

Precision ground bars are manufactured to Standard tolerances with a wide range of Round sizes from 1 in. to 6 in. diameter. Table A tolerances are within +.000—.002 down to within +.0025—.0025.

PLAN YOUR PRODUCTION WITH "MARBRITE" BRIGHT STEELS

GEO. H. MARTIN PTY. LTD.

"Marbrite House"

Telephone: MJ 4341

"MARBRITE"
BRIGHT STEELS

SYDNEY, N.S.W.

32-38 Bathurst Street

Telephone: MJ 4341

(Continued from page 40) tract every member of the community. A particularly interesting note is being struck in the provision of special exhibiting space in the spacious balconies of the Exhibition Building for exhibits which actively interest women through whose carefully

considered budgets a large proportion of the public's spending power is channelled.

It is felt by many that no more opportune time has ever existed for such a display. While money is still free and factories are all working to capacity, indications of a gradual change

from a sellers' market to a buyers' market have already begun to creep into a number of fields overseas and in certain industries in Australia. Although production is still seriously hampered by labour shortages here, a more competitive note is being struck on the retail and whole-

Industrial Minerals and Siliceous Abrasives

Laboratory Standardised,
Ground and Processed to
Specification by

**Austral Rock Milling
Pty. Ltd.**

GLADSTONE STREET
NEWTOWN, N.S.W.
Phone: LA 2562

sale markets throughout the Commonwealth.

Now, as never before, the need exists for firmly establishing trade names and identifying factory products in the eyes of the public. While turnover and a freely spending public provide the strength for embarking on retail advertising campaigns it is certainly good business to build up a lasting sales potential for leaner times to come.

This applies in particular to the hundreds of smaller factories and organisations in Australia which, while now working to capacity as a result of an overall unfilled demand for the type of product they manufacture, really have little identification in the public mind with any definite brand of product, and, therefore, will be first to feel any lessening in total demand.

Sales potential for a given product, as measured by public demand for it by name, is a long-term affair and when the pinch begins to be felt it is already too late to do much about it. Nothing impresses the public more than a visual display and there is no cheaper or more effective way of ensuring that a major portion of active interest is attracted than at an Exhibition.

With the Directors, Organisers and Technical Staff of the 20th Century Mechanical Exhibition offering trained and skilled management, and with the active support of a large proportion of industrial leaders already enlisted, it only remains for co-operative effort and general support from those factory executives, who have not yet arranged their exhibits, to ensure the absolute success of the Exhibition.

All information regarding display space and plans in detail of the building and grounds may be obtained from the Assistant Organiser, Mr. Charles D. Jackson, The 20th Century Mechanical Exhibition, 52 Collins Street, Melbourne, C.1.

GOVERNMENT SHIPBUILDING POLICY.

The Minister for Supply, Mr. Beale, said the other day the Australian ship-building industry would be kept operating vigorously. Mr. Beale said that a Canberra report that the industry might be closed down was "non-sense."

**CHEMICAL
TANKS, DRUMS,
CONTAINERS**
coated against Acids
and Alkalies
Articles of all Shapes and
sizes PLASTIC COATED
J. & F. BROCK
STOVE ENAMELLERS
5 Inkerman Street, St. Kilda
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**TRADE INQUIRIES
FROM OVERSEAS.**

Trade inquiries regarding the products listed below have been received by the Department of Commerce from its overseas representatives.

It is felt that publication of these lists will interest those Australian firms who are contemplating, or are engaged in, export trade at the present time, and those who desire such information for future reference.

For complete details, including addresses and bank references of the particular inquiries, firms are invited to apply to the Trade Promotion Section of the Department of Commerce and Agriculture in the various States, quoting the relevant reference numbers.

Agricultural Implements: South Africa, 45/656.

Automobile Spare Parts and Accessories: Argentina, 5/36, 5/45. Builders' Hardware: Colombia, 11/24.

Canned Fruit: British East Africa, 45/659; Egypt, 17/345; Sweden, 46/14.

Canned Goods: Sweden, 46/13, 46/14.

Chemicals: Argentina, 5/36 (aniline dyes); Iran, 24/68; South Africa, 45/661 (reagent and industrial).

Confectionery: Egypt, 17/345. Cycles and Accessories: Colombia, 11/24.

Electrical Supplies and Equipment: Colombia, 11/24; India, 57/2966; South Africa, 45/660.

Flour: Egypt, 17/344.

Footwear: British West Indies, 54/126 (tennis shoes).

Furniture: Colombia, 11/24 (caskets).

Glassware: South Africa, 45/661 (laboratory).

Hardware: British East Africa, 45/659; British West Indies, 54/127; Colombia, 11/24 (domestic); Nigeria, 70/30.

Headwear: British West Indies, 54/126 (hats).

Horticultural Supplies and Equipment: South Africa, 45/656.

Ice Cream Cones: British West Indies, 54/127.

Insecticides: South Africa, 45/658.

Jams: British East Africa, 45/659.

Laboratory Equipment: South Africa, 45/661.

Machinery: Iran, 24/68.

(Turn to page 45.)

WHEN IT'S WELDING—AUSTRALIA'S BASIC INDUSTRIES LOOK TO LINCOLN

**A LINCOLN
ARC-WELDED JOB—**

The Major Components of

The CROSLEY

Shelvador Refrigerator

product of—

**JAMES N. KIRBY
Manufacturing Pty. Ltd.**

Production techniques adopted for the famous Crosley Shelvador refrigerator—product of James N. Kirby Manufacturing Pty. Ltd., Camperdown, N.S.W.—are based on "quality," which is evident at every stage of manufacture.

Lincoln arc-welding machines, electrodes and procedures are employed in the production of two of the major components—the cabinet food liner and the sealed compressor unit.

Food Liner. Formed of 20 gauge steel, the food liner body is held in a special fixture for accurately locating two end pieces for welding in the flat position. A copper back-up bar permits the use of a high welding heat and increased welding speeds. Welding current is supplied by a Lincoln 150 amp. Shield-Arc Junior D.C. Welder. The three sides of the liner body and end piece are joined by one continuous single pass weld taking 4½ minutes. The electrode selected is Planeweld No. 2, ½ in. size—an electrode specially designed for high performance welding on light gauge steel.

Sealed Unit. The envelope of the motor-compressor unit is 10 gauge steel and calls for a 32 in. circumferential weld, accomplished by revolving the assembly in a rotating jig while welding with a ½ in. Fleetweld 35 electrode. Floor to floor, 8 minutes. Fleetweld was chosen for high physical properties and deep weld penetration at high welding speeds. Welding current is supplied by a Lincoln 200 amp. Shield-Arc D.C. Welder.

Look to LINCOLN

FOR BETTER WELDING MACHINES—ELECTRODES—PROCEDURES

THE LINCOLN ELECTRIC COMPANY (AUSTRALIA) PTY. LTD.

Head Office & Works: 109 Euston Road, Alexandria, N.S.W.

Sales & Service Offices: Sydney • Melbourne • Brisbane • Adelaide • Perth • Launceston • Newcastle • Wollongong

***MONSANTO 2:4-D**

AN EFFECTIVE AND PRACTICAL
**SELECTIVE
HERBICIDE**

**Serving manufacturers interested in the
rapidly growing market for agricultural
and horticultural preparations.**

Developed as a result of extensive research with plant hormones, the uses of selective herbicides in agriculture and horticulture are rapidly increasing. Australian produced Monsanto 2:4-D is a proved selective herbicide, supplied to compounders either as the soluble Sodium 2:4-D or the insoluble 2:4-D Acid. Sodium 2:4-D, being water soluble, may be used directly, or 2:4-D Acid in combination with some organic amines will give the popular liquid concentrates. A fund of technical information on the use of Monsanto 2:4-D as well as samples, prices and delivery details is readily available on request.



COMPRISING 2:4-D ACID AND 2:4-D SODIUM SALT

Years of research have proved 2:4-D to be a valuable selective herbicide—a useful weapon in the unending fight against weeds in lawns, fields, pastures, crops and many other areas. Whilst the killing of all weeds in one area with one application is the exception rather than the rule, re-treatment of weedy areas can

be made with 2:4-D with less interruption to the productive use of the land than is possible with any other chemical weed killer now in wide use.



SERVING INDUSTRY . . . WHICH SERVES MANKIND

MONSANTO SALES OFFICES:

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and TASMANIA**

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Telephone MW 9231

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Monsanto (Australia) Pty. Ltd.
249 George Street, Sydney
Telephones BW 3800, BW 3809

QUEENSLAND

Monsanto (Australia) Pty. Ltd.
Eagle Farm Road, Brisbane
Telephone M 3133

MONSANTO AGENTS:

WESTERN AUSTRALIA

N. M. Symington & Company Pty. Ltd.

NEW ZEALAND

Gollin & Co. Pty. Ltd.

(Continued from page 43.)
Milk Powder: British East Africa, 45/659.

Optical Instruments and Equipment: South Africa, 45/661 (frames, cases and products).

Paints: Colombia, 11/24.

Pencils: British West Indies, 54/127.

Pharmaceutical Requisites: South Africa, 45/660.

Piecemeal: Egypt, 17/345 (woollen); Iran, 24/68 (woollen).

Plants and Machinery: Argentina, 5/36.

Plastic Material and Goods: Argentina, 5/36 (moulding products); Egypt, 17/345; South Africa, 45/661 (display material).

Radios and Accessories: India, 57/2966.

Scientific Instruments: South Africa, 45/661.

Sporting Equipment: Colombia, 11/24; South Africa, 45/652.

Spraying Equipment: South Africa, 45/656.

Stationery: British West Indies, 54/127.

Textiles: Argentina, 5/45.

Toilet Requisites: South Africa, 45/660.

Tools: Argentina, 5/45; British East Africa, 45/659; Nigeria, 70/30.

Tractors and Accessories: South Africa, 45/656.

Vegetables (canned): Sweden, 46/14.

Wheelbarrows: Colombia, 11/24.

Wire: India, 57/2966 (electrical wire, cables, flex).

and divided into four sections. Only the section corresponding to the thighs, fixed to the frame, is incapable of independent movement; the head, trunk and leg sections can be moved separately, together, or in conjunction with the bed frame, which itself pivots round a central point. Thus, very many different nursing positions can be obtained, from either side of the bed, by finger-light control. To induce relaxation, the "Magbed" is finished in restful cream and green lacquer.

NEW MEMBERS.

SOUTH AUSTRALIAN CHAMBER OF MANUFACTURERS.

The following were unanimously elected members of the S.A. Chamber at a recent meeting of the Council:—

J. F. Bergin, 52a Gilbert Place, Adelaide—Tailoring.

Luston Steel Furniture Co., 235 Port Road, Queenstown—Steel furniture manufacturers.

Norwood Engineering & Concrete Works, 14 Margaret Street, Norwood — Manufacturing engineer.

Paragon Tyre & Rubber Co. Ltd., 23 Hanson Street, Adelaide—Tyre retreading.

R. Focock & Son, 14 Allenby Road, Rosewater Park—Builders and contractors.

H. M. Radford & Co. Limited, Payneham Road, Payneham—Building contractors.

Ross Simmons, 252 Grange Road, Flinders Park—Builder and contractor, joinery manufacturer and storekeeper.

Standard Implement Co. Ltd., Tanunda—Agricultural engineers.

Steelweld Industries, 196 Glen Osmond Road, Fullarton Estate—Sheet metal work.

TEXTILE LABELLING

CRITICISED.

At the recent conference of the Associated Chambers of Commerce held in Sydney, a resolution was moved by a Melbourne delegate, Mr. D. M. Dickson, to the effect that textile labelling in the form proposed to operate from October 1st is unworkable and should be altered to line up with South African regulations. He estimated that the proposed scheme would cost from £2 million to £3 million a year and would operate to the long-term detriment of the wool industry. "The South African regulations," he added, "were framed after consultation with the United Kingdom. We should do the same and only label goods having a substantial wool fibre content."

It is reported that Commonwealth Ministers of the Departments concerned are to hold a round table conference at an early date with representatives of wool and trade interests to discuss the modification of textile labelling regulations.

Brook Motors

QUALITY and VALUE



EFFICIENCY	POWER FACTOR	MOTOR	DELIVERY
Full	Half	Full	Half
81	78	.82	.66
88	87	.91	.83
90	88	.91	.82

The above table is for "Brook" 1440 R.P.M., Squirrel Cage, Protected Type, Continuously Rated Motors guaranteed within B.S.S. 168.

"Brook" Motors, from fractional to 200 H.P., include Protected, Enclosed, Drip-proof, Flame-and Explosion-proof, Loom, Lift and other types. Warburton Franki have stocks of "Brook" protected motors, which you are invited to inspect.

Prices available on request.

WARBURTON FRANKI LTD.

• 233 Elizabeth Street • 103 Scott Street • 307 Kent Street
Brisbane, B 3181 Newcastle, B 3741 Sydney, BX 2361

80 Keira St., Wollongong
Wet. 888

380 Bourke St., Melbourne
MU 6355



HAVING TROUBLE WITH BEVEL GEARS? THEN CHANGE TO **SPIRAL BEVELS**

Only SPIRALS have these advantages:

- As many as 5 teeth always in mesh, giving smooth, quiet action, and also
- reduces working load on tooth.
- Localised tooth bearing, allowing greater tolerance in assembly.
- Curved teeth keep lubricants between mating surfaces.
- The 20° long-addendum tooth form prevents interference when the pinion has as few as 6 teeth.

Capacity for SPUR and CLUSTER GEARS to 8in. diam. done by the FELLOWS METHOD.



REMEMBER! These gears actually COST NO MORE than straight bevels.

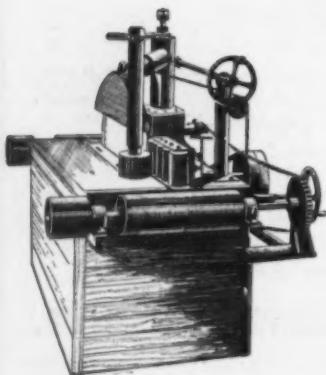
RANGE: $\frac{1}{2}$ in. to 3 $\frac{1}{2}$ in. diam. 12 D.P. to 50 D.P. 12-teeth pinions to 100-teeth crown wheels.

G. L. SHERATON

MANUFACTURING AND GENERAL ENGINEER.

445 HEIDELBERG ROAD,
FAIRFIELD, N.20, VICTORIA

TELEPHONE: JW 4752.



QUICK-ADJUSTING NATIONAL RADIAL ARM SAW

SUITABLE FOR CASE MILLS & MEDIUM-SIZED WORK

Of all-steel construction, the National Radial Arm Saw is ideally designed for use in case mills and on medium work. In size, capacity and ease and speed of operation it is specially adapted for the job.

Saw diameter	36in. or 30in.
Shaft diameter	2in.
Speed of saw on rim	10,000 feet per minute
Height of bench	31in.
Table size	54in. x 32in.
Feed roller diameter	6in.
Flat roller diameter	6in.
Quick adjusting roller fence	
Pulley diameter	12in. x 5in. C.F. ball-bearing loose pulley.

The 3-speed gear-box gives feed rates of 60ft., 75ft. and 90ft. per minute. All shafts run on ball-bearings.

For quotes and further details, apply to the manufacturers —

NATIONAL ENGINEERS PTY. LTD.

White and Brennan Streets, Leichhardt, N.S.W.

LM 4481-5

NICKEL IN CAST BRONZE

gives improved mechanical, wearing and casting properties, as well as added strength and toughness. Furthermore, Nickel minimises porosity and prevents "lead sweat".

LET US TELL YOU WHY — AND HOW

WRIGHT AND COMPANY

81 Clarence Street, Sydney

Victoria: Hawker, Richardson & Co., 200-218 William St., Melbourne.

MULTIPLE STRAIN-TEST RECORDER.

Applied electronics has enormously simplified strain testing. The strength of weight-bearing structural components for engineering, aircraft building and many other purposes can be tested by subjecting them to continuously increasing weights. Their behaviour may then be assessed by means of a strain gauge.

The procedure can be very wearisome and time-wasting. In a relatively large test piece, such as, for instance, an industrial pressure vessel, or an aeroplane wing, so complex are the strains set up that several hundred gauges may be in simultaneous use to analyse them. It is clearly uneconomic for continuous watch to be kept over them individually by the human eye.

A superior method is provided by a display unit, product of a British firm, which simultaneously records results from ten separate strain-gauges.

The theory underlying the device is very simple: a common type of strain-gauge works on the fact that wires made of such alloys as Manganin show changes in resistance under strain. The wire is intimately connected with the test sample, current passed through it, and electrical measurements made on a dial. When the sample gives, the current and voltage changes.

In the display unit, the dial is replaced by a cathode ray tube. The electrical energy passing through ten separate gauges is fed into the equipment and after amplification, produces visual indications on the tube's face. The indications take the form of either straight or curved lines rising above and below a theoretical zero base. Variations from the norm clearly show when the sample is giving way under strain.

EAGLEY MILLS MANAGER.

Mr. H. V. McIvor has resigned as manager of the knitting mill and as a director of Eagley Mills Pty. Ltd. Mr. R. D. Croll has

been appointed acting manager of the knitting mill section.

NEW DISTRIBUTORS FOR 'TIGER' SAWS.

New distributors have been appointed in each State for the well-known "Tiger" brand saws made by John Farmer Ltd., of Adelaide, South Australia. The aim of the new distribution set up is to make possible a more direct contact between the manufacturers and wholesalers, as it is felt this will be more advantageous for sales and service. South Australian sales are being handled by Mr. Vic. Mildren, sales manager of John Farmer Ltd., from the company's premises at King William Street, South. The representations in the various States are:—Victoria—B. H. Blashki, 325 Flinders Lane, Melbourne, covering Victoria and Tasmania. N.S.W.—D. W. Custer Pty. Ltd., 235 Clarence Street, Sydney. Queensland—D. W. Custer Pty. Ltd., Heindorf House, Queen Street, Brisbane. W.A.—Cameron & Francis, 9 Howard Street, Perth.

John Farmer Ltd. have paid a tribute to the work done for them by Marshall Agencies of Adelaide, and its affiliated offices under the previous sales set up, and Marshall Agencies will continue to handle export orders.

BIG ORDER FOR RAILWAY TRUCKS.

The Sales Division of Kelly & Lewis Ltd., K. L. Distributors Pty. Ltd., has received an order worth around £750,000 for the supply of 500 trucks to the Victorian Railways.

Trucks will be fabricated in the U.K. by Birmingham Railway Carriage and Wagon Co. Ltd. and will be assembled at Kelly and Lewis' Springvale works.

Kelly and Lewis Ltd. have manufactured rolling stock for the Victorian, Commonwealth and Tasmanian railways for many years and recently completed an order for the S.E.C.

The company is also doing similar work for the British Phosphate Commission.

ELECTRICAL CONTACTS

The most comprehensive range in the world.

The range of contact materials and forms in which our London House manufacture them, are the most comprehensive in the world. This is worth remembering when you have a problem of Electrical Contacts. Further particulars on application.

• Electrical Contacts

This cloth bound reference volume for the consulting and electrical engineer, written by L. B. HUNT, A.R.C.S., M.Sc., Ph.D., in collaboration with seven associates, is an essential book for the technical library. Very fully illustrated with graphs and tabulations and fully indexed, it is priced in Australia at 15/-, post free — please send remittance with order.

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Offices: 824 George St., Sydney — MA 6661-2
Works: Surry Hills & Chippendale, N.S.W. FAS165

Associate London House: JOHNSON MATTHEY & Co. Ltd., Hatton Garden.

BEAT WINTER FUEL SHORTAGES! "ELECTROMATIC"

Manufactured in Great Britain



FULLY AUTOMATIC OIL-FIRED COMBUSTION UNIT

Be independent of both solid and gas fuels! Act now! Install an "ELECTROMATIC" and enjoy an uninterrupted supply of steam from your boiler or heat from your furnace.

Additional working advantages of the "Electromatic"

- Automatic Combustion — No manual control necessary.
- Efficient, economical combustion — Low CO₂ content in flue analysis.
- Cleanliness — No dirt, dust, ash, soot. Clean, ship-shape boiler.
- Fuel easily procured — Oil readily available and pumped into your tanks.

Investigate the advantages of a completely automatic installation — it pays ... we'll PROVE it to you! 'Phones MA 7689 for service.

Distributed by

INDUSTRIAL CONTROL COMPANY OF AUST.

243 CASTLEREAGH STREET, SYDNEY. 'Phones: MA 7689, MA 3448.

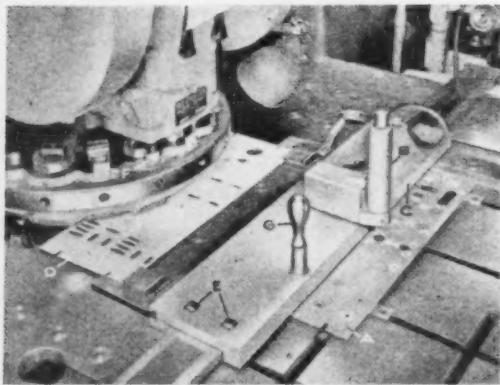


Fig. 1. Work positioning attachment on a turret press. A colour control system facilitates selection of template holes and punches.

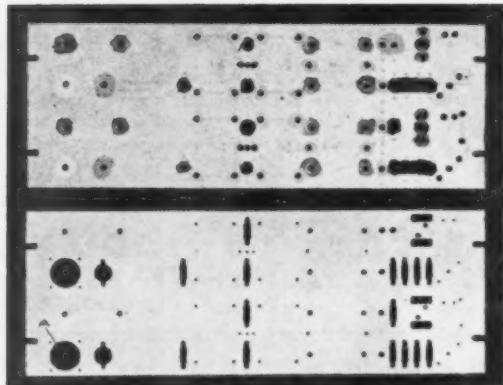


Fig. 2. Typical mounting panel and template. Panels of this type are perforated to receive condensers, relays and transformers.

Multi-Hole Piercing

Unusual Methods of Operation on Parts in Small Quantities

Several unusual and interesting methods are being used by a company overseas, for the economical piercing of holes, of various sizes and shapes, in work which is produced in small quantities. Typical examples of such work are mounting panels for electrical equipment, in which holes of various standard forms and sizes are provided for the reception of condensers, transformers, relays, and resistances. These holes must be punched in locations in the various panels to suit the particular applications for which they are required.

MUCH of this work is handled by the use of ball bearing mountings, two of which may be seen at E. The plunger is depressed into full engagement with a hole in the template, it actuates a limit switch which energises a solenoid. This, in turn, actuates the ratchet clutch pin to trip the press. The hole is then pierced by the punch and die which have previously been indexed to the working position. Accidental tripping of the press before the locating plunger is properly aligned with the template hole is prevented because the limit switch does not function until the plunger has been fully depressed.

Coloured tabs F are provided at the die stations on the turret, a different colour being used to in-

dicate the type of hole produced at each of the eighteen stations. The template holes are surrounded by circles of corresponding colours in accordance with the type of hole required at each position. It is thus only necessary for the operator to ensure that the colour of the punch station which is in the operative position corresponds to that of the template hole. After indexing the turret to a given station, all the holes of that type which may be required are pierced by successively engaging the template holes with the appropriate colour circles. When these holes have been produced, the turret is indexed again and the procedure repeated.

The perforating of rows of holes

is facilitated, says an article in "Machinery," by the use of clamps which prevent movement of the work-carrier and plunger in a direction at right angles to the line of the holes. For example, when a row is to be punched in a longitudinal direction, a lock G is twisted with one hand to prevent transverse movement, and the plunger is depressed with the other. A lever type clamp prevents longitudinal movement of the work-carrier and plunger when a row of holes is being pierced in a transverse direction.

Most of the mounting panels perforated in this way are low-carbon steel or aluminium sheets up to 1 in. thick. A panel containing 100 holes may be seen in Fig. 2, with the template above it. This panel requires eighty strokes to complete the piercing and is handled at the press only once. By comparing the template with the completed panel, it will be apparent that certain groups of holes, such as those indicated at A, are pierced at a single station. Hole locations are held to within ± 0.008 in., and such panels can be pierced at the rate of twelve per hour.

Besides ensuring improved quality of work, the advantages of this method include the elimination of location spotting and drilling of holes, together with such incidental operations as de-burring, increased



Fig. 3. Centre punches are inserted in accurately located holes in templates for spotting panels in a press.

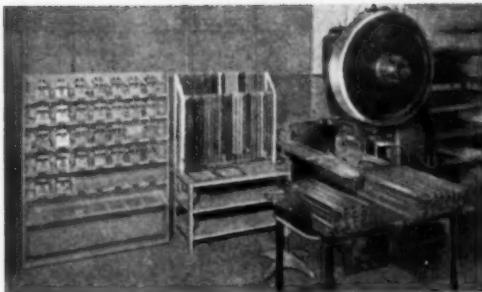


Fig. 5. Channel-shaped mounting panels are pierced in presses with dies which are quickly interchanged to produce various sizes and shapes of holes.

safety since the operator does not handle the work at the dies, and a saving in time since the operation is completed on one machine.

In cases where the work requires both drilling and piercing, a standard press is used to eliminate spot-drilling. A master template is employed, with centre punches fitted into accurately located holes, as shown in Fig. 3. This is clamped to a slide on the press and a panel blank placed over it. The slide is then moved back to bring the work and template beneath the ram so that all the required holes are spotted at once when the press is tipped. Considerable time is saved by this method because it is unnecessary to clamp a template to each workpiece for spot-drilling the holes.

Another type of mounting panel is long, narrow, and flat, with holes of various shapes disposed about a longitudinal centre line. The perforations in such panels are formed on a press brake containing a series of punch and die sets, as illustrated in Fig. 4. Templates with numbered "centring" holes are provided for each job. The numbers correspond to specific centres for single holes or groups of holes on the panel, and corresponding numbers are provided on the press ram above each of the sets of tools. The operator can thus select, successively, the dies required for the various positions on the panel. All holes of a given type are punched before passing to the next die. An indexing finger engages the numbered holes in the template and provides a stop against which the work is located to obtain the correct positions of the holes. Typical mounting panels are seen on the press table. A guard has been removed in this illustration, so that some of the dies used in these operations are visible.

Mounting panels of the channel type are perforated in a different manner. These panels also have various shapes and sizes of holes in a single row along their length. For these panels interchangeable punches and dies are employed in conjunction with a master die-holder in a press, as shown in Fig. 5. Frequently used spacings between the hole centres are standardised and the panels with these

spacings are coded. Templates are provided for each of these codes and may be seen next to the cabinet containing the various dies required for holes of different shapes.

A numbering system similar to that described for the press brake arrangement is employed when using the templates. Each die is numbered to identify the type of hole which it produces, and the holes in the templates are numbered to indicate the type of hole required at the corresponding position on the mounting plate. As may be seen in Fig. 6, a work locating arm with an indexing pin engages the template holes as the operator selects specified centres. By using dies which produce the required openings on these centres, the panels are perforated in accordance with requirements.

All the holes of one type are punched before changing dies. The master die-holder, illustrated in Fig. 7, permits the rapid interchange of dies for each series of holes.

If panels having 1-in. centre distances are to be perforated, a rack and scale are used in the same manner as the templates, because it is impossible to provide template holes spaced 1-in. apart. The rack is of 1-in. pitch and is engaged by teeth on the work locating arm, which is aligned with a scale mounted adjacent to the rack.

When the rack is employed, the specifications for hole locations are also given by number, each number being applied to a centre on an 1-in. pitch. For example, the blueprint may specify that centres numbered 4, 12 and 20 have holes suitable for a certain type of condenser, and that centres numbered 28 and 36 must be pierced to suit a particular relay. A die which produces holes to suit the condenser is mounted in the press and the work is fed through and punched by referring to the centre numbers on the scale and engaging the rack accordingly.

When this series of operations has been completed, the die is quickly removed and replaced by the tool for the specified relay, after which the operation is repeated.

All the holes in each panel are perforated in one machine, and the

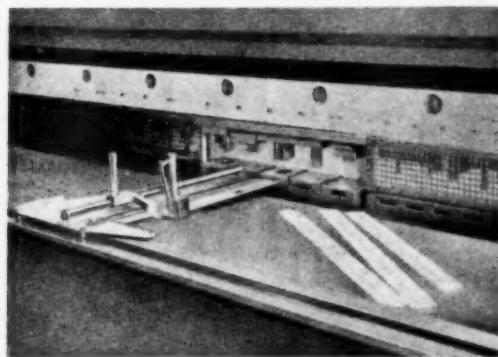


Fig. 4. Sliding fixtures with index fingers and templates are used to obtain proper spacing of various types of holes in flat mounting panels.

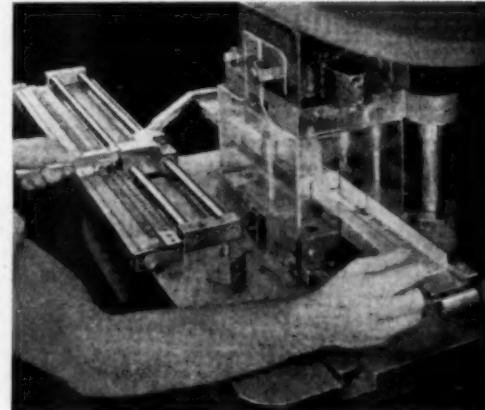


Fig. 6. Press set-up employing racks or templates for locating the centres of holes.

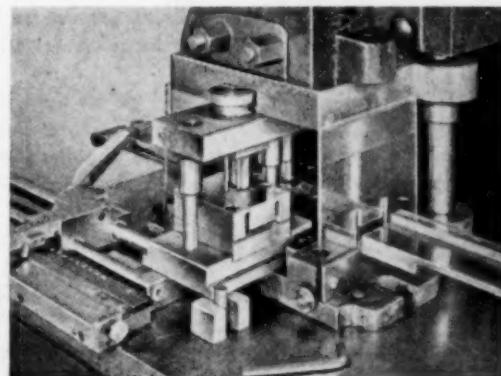


Fig. 7. A master die holder permits the rapid interchange of dies for producing different types of holes in a press.

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master die-holder arrangement has reduced setting-up time by 90 per cent., and initial tool costs, tool replacements, and maintenance have been reduced by as much as 50 per cent.

KNEELESS TYPE VERTICAL MILLING MACHINE.

There has recently been introduced a kneeless type vertical milling machine, which has a capacity of 62 by 29 by 28½ in., and combines the advantages of a high speed range, with large table capacity, so that milling operations which are not excessively heavy can be undertaken on large components. Either high speed steel cutters or cemented-carbide cutters, with positive or negative rake, can be used on this machine.

The spindle head, which is balanced by weights inside the column, has 16 in. of vertical adjustment and is raised and lowered by the operation of the two handwheels on the right of the column, the smaller handwheel being turned to release a clutch, when rotation of the larger wheel gives a quick traverse. Fine adjustment for putting on the cut is made by the handwheel at the front of the head, and a micrometer dial is fitted to facilitate accurate setting. The head is securely locked to the column by movement of the long lever at the front.

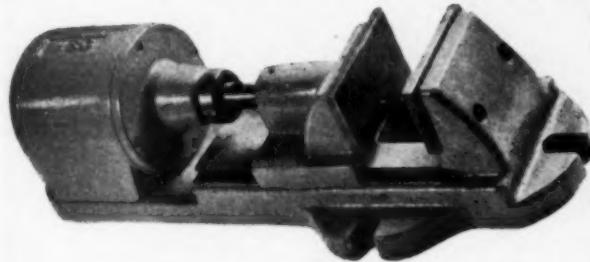
The multi-splined spindle is mounted in precision ball and roller bearings and has a standardized nose with non-stick taper, and a clutch drive with provision for securing cutters directly to the spindle. A draw-bolt and adapter are provided for securing arbors, collets, and cutters with No. 11 B. & S. taper shanks. The minimum distance from the table to the spindle is 12½ in., while the distance from the centre of the spindle to the face of the column is 26½ in.

Drive to the spindle is by a 15/71 h.p. 2-speed, reversing, flange-mounted motor, through a gear-box having fast and slow speed ranges, which are selected by a handwheel on the left of the head. In all, 32 spindle speeds are provided, sixteen from 43 to 1,525 r.p.m., with the motor delivering 15 h.p. and running at 2,900 r.p.m., and sixteen from 21 to 750 r.p.m., with the motor delivering 7½ h.p. and running at 1,430 r.p.m. Rapid changes are effected by rotating an easily-read dial until the speed required comes opposite a pointer. The heat-treated steel gears run in oil and have ground teeth, while the shafts are mounted in ball and roller bearings. The motor is controlled for start, stop and inch by push-buttons at the front of the machine.

The T-slotted box-section table has a working surface of 85 by 28 in., and is traversed by a rotating feed nut which engages a

(Turn to page 58.)

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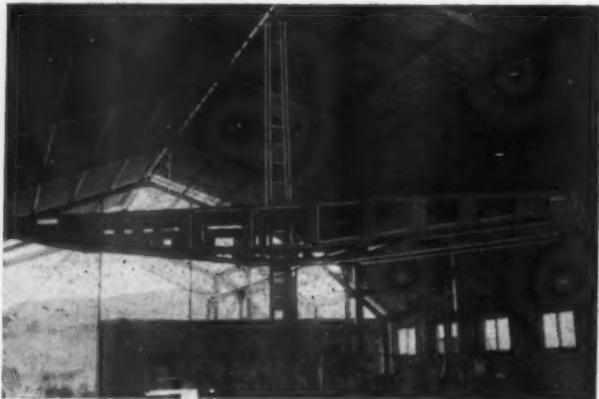
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(Continued from page 50.)
non-rotating feed screw of large diameter and coarse pitch. The screw is not splined and is always in tension, while the amply-proportioned phosphor-bronze nut is adjustable for wear. The thrust of the cut is taken on ball thrust bearings, and the slideways of the saddle are completely covered.

Automatic reversible feeds and rapid power traverses are provided to the table in the longitudinal and transverse directions, these being driven by a 2 h.p. 2-speed, horizontal flange-mounted motor. The electrical gear is so arranged that any fault or overload in the main motor automatically trips the feed motor. There are eight feeds from 0.7 to 2.8 per minute with the motor running at 470 r.p.m., and sixteen feeds from 2.2 to 40 in. per minute, with the motor running at 1,430 r.p.m., giving 24 feeds in all. The rapid power traverse at 150 in. per minute can be engaged in either direction as soon as the feed has been automatically tripped, without setting any other levers.

The quick-traverse lever is moved in the direction in which it is desired to traverse the table, and may be operated with the spindle stationary or rotating. When the lever is returned to the vertical position the table stops. Both the feed and quick-power traverse motions are provided with automatic and dead stops. When the automatic feed or rapid power traverse motion is engaged the handwheels for the longitudinal and transverse motions are automatically disconnected so that they remain stationary.

Oil bath lubrication is provided for the important mechanisms on the machine, feeding cups being fitted in convenient positions for replenishing with oil. If a machine is intended for milling steel, a motor-driven centrifugal pump and fittings can be supplied, controlled by a direct-on contactor with start and stop push-buttons grouped on the panel at the front left-hand side.

A 48 in. diameter circular table, graduated in degrees on the peri-

pher, can be supplied with the machine, having both hand motion and automatic variable feeds, with automatic trip to the feed. (2497).

IMPROVED TYPE OF WATER FILTER.

The new type of filter representing a departure from the sand filter and other conventional types introduces many new advantages destined to widen the field of filter application. Filtering takes place through a shallow bed of Kieselguhr powder or diatomaceous earth at rates far in excess of those possible through other types of filters (i.e., 1 to 20 tons of water per hour). Moreover, the filter is but a fraction of the weight and size of other types of comparable capacity and, since no coagulant is required, a considerable saving in the cost of operation is effected and the filter can be used for liquids where the addition of chemicals is not permitted. Another advantage is that it is easily operated by unskilled labour.

Any filtering operation consists of passing a liquid, which contains solid matter, through a porous material so that the solids will be retained. The filter consists of a specially constructed element formed by a wire wound in a screw thread over a rigid foundation. This forms an unchockable strainer on which the filter bed of Kieselguhr powder is deposited. Filtration may be to any desired degree of fineness depending only on the grade of material used for the filter bed.

In filtering, a measured amount of diatomaceous earth or other filter aid is first mixed with a volume of the water or other liquid which is to be filtered. This slurry is introduced into the filter shell through the charging funnel. Next the liquid to be filtered is introduced through the inlet at the bottom of the filter. The slurry is forced upwards by the flow of liquid and forms a uniformly deposited filter bed of

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fine filtering qualities on the surfaces of the elements. The liquid then filters through this bed and passes upwards through the centre channels of the filter elements and thence to the outlet of the filter.

In some instances, when filtering a liquid having a substantial amount of suspended matter, it is found that continuous feeding of a small amount of filter powder or other filter aid after applying the filter bed is advantageous. This method of operation will increase the length of filter run many times.

Deposition of suspended matter on the filter bed during filtration causes a build-up of back pressure so that the filter must be back washed when the pressure available is exhausted. Due to the rigid foundation of the filter elements the filter may in some instances be safely operated to 100 lb. per sq. in. back pressure before back washing is necessary. In ordinary practice, however, back washing at between 40-60 lb. per sq. in. back pressure is recommended for pumping economy.

Cleaning of the filter is accomplished without an additional supply of back-washing water. The conditions provided for by the patented system to effect back-washing are, in fact, an air trap above the element plate to which the elements are attached, and an air trap below the element plate. At the end of the filtering run the full head of pressure available is applied to the filter by closing the outlet valve. The inlet valve is then closed and the air trapped under the element plate is vented in an instant by opening the quick release air valve. The air pressure in the head of the filter forces the liquid through the elements in a reverse direction at a terrific velocity since there is no resistance below the element plate. This provides a veritable explosion of the filter bed which thoroughly cleans the filter elements. The sludge can

then be withdrawn from the lower sludge outlet valve and the filter is automatically replenished with air before the next filter run is commenced. The entire operation takes only a minute or two.

The filter shell is constructed of steel or other metal, dependent upon the character of the liquid to be filtered. An observation port is provided on the body of the shell so that the formation of the filter bed on the elements may be observed. The standard construction consists of mild steel filter shell, gunmetal valves, elements in extruded brass electro-tinned after manufacture and wound with Monel wire. For liquids other than water, suitable stainless steel elements, shells, fittings, valves, etc., are provided where required.

Some typical applications of the filter are on food products, such as beer, cider, wines, syrups, water, vinegars, animal fats and oil, vegetable fats, fruit juices and essences.

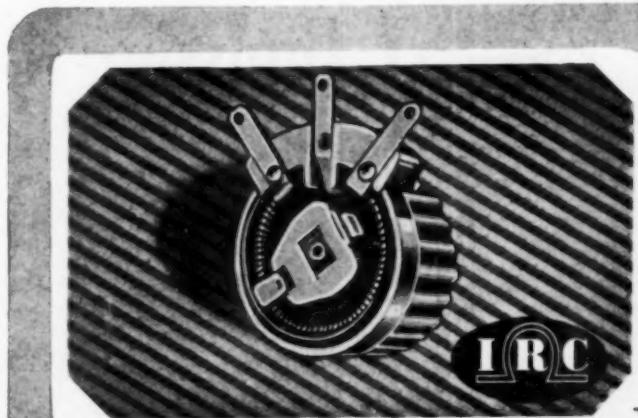
For automatic continuous feeding of Kieselguhr powder the equipment must be simple, sturdy and accurate. For this purpose the makers offer their patented appliance; this picks up a definite amount of filter powder and discharges it to the point of application. [2496].

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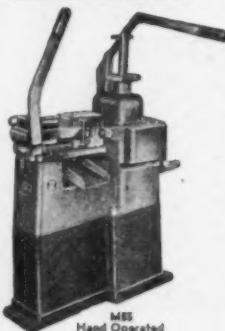
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Complete specifications lodged with the Patents Office are open to public inspection almost immediately after their lodgment.

Interested persons are now able to obtain the details of an invention for which protection is being sought.

Provision is also made (Patents Act, 1946) for an applicant to obtain damages, if infringement occurs, from the date of publication of the application. A rule of practice has been established whereby an application will be examined more speedily when a prima facie case of alleged infringement is proved.

Particulars of the necessary procedure will be supplied by any Patent Attorney practising in the Commonwealth.

PATENT SPECIFICATIONS ACCEPTED

ADJUSTABLE LOUVRES.
137,415.—A. J. Wilderspin and
E. S. Wilderspin, W.A.

To operate adjustable louvre shutters, slotted pivot members connect louvre brackets with operative means, on the inside of a channel frame, said pivot members having pin members projecting on each side for connecting purposes. The channel has

a number of openings therein to take the pivot members and an operating bar slides in the member, and is slotted, to allow the bar to move without interfering with the pivot members. Slots in the bar receive members for actuating the louvre brackets per medium of a control lever.

TROTTING SPIDER.

137,418.—D. Dunjee, W.A.
To prevent the wheels of competing vehicles interlocking a spider is characterized by a transverse bar or bars extending

across the rear of one or both wheels. Rollers may be fitted.

CEILING SWITCH INDICATOR.

137,416.—H. F. Vickery, N.Z.

To indicate the open or closed condition of the circuit when electric power has been temporarily cut off, a ceiling switch is fitted with a visual indicator extending from the contact rocker of the switch to the exterior of the switch body and movable by the switch mechanism in accordance with the respective open or closed position of the switch. The

indicator arm forms a part of the contact rocker and a detachable extension consists of a rod threaded on the arm and having at its outer end an enlargement to give greater visibility.

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137,422.—B. F. Drury, Vic.

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immersed in the substance to be mixed, and electro-magnetic means, for effecting lateral vibration of said member. Application of A.C. power to winding causes vibration of armature which is transmitted to the member.

CONCRETE FORMER WITH FIXED RODS.

137,427.—John Keenan, N.S.W.

For erecting cavity or solid concrete walls outside forms are attached to face plates by threaded guide shafts, a cavity form is expanded by oval cams and outside rods are rigidly fixed to axles which are tapped to take threaded shafts. Handles are provided to raise or lower rollers until the device is level as indicated by spirit level. The forms are retracted from the walls by means of handles, the device can then be rolled along the wall into a new position where the forms are expanded and the device levelled ready to fill the next wall section.

PNEUMATIC RIVETER WITH MANUALLY OPERABLE WORK- ING HEAD.

137,428.—C. W. Smyth, Vic.

To provide a working impact or blow which can be easily adjusted to any given pressure and which will be exactly reproduced each time the machine is operated quite independently of the operator, a pneumatic riveting machine comprises: a manually operable working head with a cylinder and a piston with a striker receiving riveting tool and spring means which are automatically brought into action by relative upward movement of the striker, and tool for admitting compressed air into the cylinder behind the piston through ports, so that the piston will act upon the striker at a predetermined pressure which is unaffected by the speed and as the cylinder is caused to descend by manipulation of its manually operable device. The upward movement of the piston is limited by a stop screw and the striker rod is limited in its downward movement by a coiled spring.

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137,444.—F. A. Schubert and R. B. Emery, Vic.

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137,450.—R. W. Edmondston,
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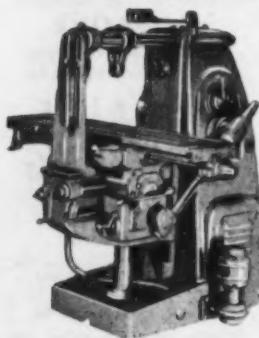


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to the body section and pivotable thereon from a dependent position to an elevated position.

ARC WELDING RECORDER. 137,449.—Quasi-Arc Pty. Ltd., Vic.

To integrate the actual welding periods during which the arc voltage of a welding circuit is maintained between predetermined minimum and maximum values, e.g., 18 and 45 volts respectively, the driving energy source of a time recording device preferably a revolution counter is independent from the welding circuit and a relay system associated with the welding circuit interrupts the transfer of energy from source to the recording device whenever the voltage falls outside the predetermined values.

LIQUID DISPENSING APPARATUS. 137,455.—O. N. Vogt, Vic.

A dispenser for measured quantities of liquid from bottles is characterized by the provision of a conical sealing member retained in the usual casing by depressions, said seal being formed of cork or like material, and cooperating with the usual coned-ended rotatable measuring chamber.

ABRASIVE CYLINDER HONE. 137,456.—L. B. Herne, N.S.W.

One edge of a sheet of abrasive material, passed through the slot of a sleeve and into the slot of a rod, upon which the sleeve is rotatably mounted, is locked in the slot by screws so that upon the rod being rotated in relation to the sleeve, part of the abrasive sheet is wrapped upon the rod inside the sleeve, while when the sleeve and rod are rotated in the reverse direction, that portion of the abrasive sheet around the rod is drawn therefrom and wrapped around the sleeve. The sleeve is positioned at one end by a cap and at the other end by a keeper sleeve provided with teeth engaging complementary teeth of the sleeve, so that the two sleeves may be locked in adjusted position by a grub screw. In the modification hones of different diameters for use with stepped cylinders are arranged in alignment, adjustment being effected at the end of the hone remote from the driving end.

COIN OPERATED VENDING MACHINE. 137,465.—J. M. Perrin and Z. Rivers, Vic.

A coin vending machine which upon the insertion of a coin of predetermined value delivers a package and change in excess of package value, comprises a casing having coin reservoirs and storage compartments and accommodates a shaft adapted for external manipulation, which carries an operation wheel having locking means, which are adapted to be freed by a coin upon rotation of shaft. Means are provided for ejecting a package upon operation of the wheel while simultaneously actuating means to eject coins as change. The wheel has a toothed periphery adapted to be engaged by a lug to prevent

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reversal after freeing the lock. The package ejection means comprise a pair of discs carried on shaft and having peripheral recesses to alternately receive and deliver a package, and the change mechanism comprises a slide which is actuated by an arm and lever to deliver the lowermost coin from each reservoir.

GLASS FEEDING MECHANISM.

137,460.—Australian Glass Mfrs. Co. Pty. Ltd., Vic.

To feed bottles from a limited part of the periphery of a disc to one end of a conveyor, a plate which is rotatably mounted in an approximately horizontal plane and which is adapted to receive and convey articles to be treated has gear means for rotating it to convey the articles towards a wiper arm having helical spring means for oscillating it to sweep the articles off the plate. The

distributing plate itself is secured to the upper end of the outer spindle which has bevel gear rotating means, and which contains an inner spindle with bevel gear oscillating means; the conveyor being located below an opening gap in a guard ring adjacent the plate.

WOOL PRESSES.

137,472.—J. D. Brown, N.S.W.

To facilitate baling, a mobile press comprises a wheel supported framework, adapted to straddle a bale of wool or the like, when supported in a bale frame, a power actuated platen adapted to move vertically by a source of motive power and pawl and ratchet means for engaging the framework, and the bale frame so as to limit vertical movement of the press with respect to the bale frame.

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137,476.—A. H. N. Scott, Vic. Inner and outer members disposed about a common axis are adjustably coupled by the provision of spring urged balls or rollers, being thrust between the cylindrical surface of the inner member and the inclined portion of the outer member. Disengagement is effected by levers. The

invention is described as applied to a bicycle steering head, a brake lever and a brace.

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137,475.—John Thompson (Australia) Pty. Ltd., Vic.

To protect the edges of a submerged conveyor belt in which the hot ashes are quenched in a trough containing water, flexible strips are secured to the side walls of the quenching trough to depend therefrom and overlap the upturned edges of the deformed belt whereby the ash or material deposited on the belt is prevented from working upwardly over the edges into the trough.

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The flexible strips may be made of rubberized fabric or like material extending in one piece along the length of the trough and supported clear of the side walls by spacing members.

93,524. A design of a flag showing a shield with the letters "CDD". Machinery.—Chrysler Dodge De Soto Distributors Limited, Maple Avenue, Keswick, South Australia.

NOISE PRODUCING TOY.
137,177.—H. L. Ritchie, N.S.W.

A toy having the appearance of a lawnmower includes a cage, concentrically fixed on an axle consisting of a number of slats fixed at their ends to discs and housing one or more tumblers, such as marbles. Two roller wheels of larger diameter than the discs are mounted on the ends of the axle, and a yoke forming part of a hand-piece is pivotally disposed on the axle. When the cage is rotated the tumblers roll haphazardly and strike the slats, thus simulating the sounds due to the striking of xylophone slats.

96,015. "Acuro." Domestic floor cleaning and polishing machines.—Potts & Thurbon, 224 King Street, Newtown, N.S.W.

93,875. A rectangular label design with the initials "S. & L." Welding machines.—Stewarts & Lloyds (Australia) Pty. Limited, Shell House, 12 Carrington Street, Sydney, N.S.W.

94,978. "Sih." Machinery.—Machinefabriek C. Maters C.V., Beverwijk, The Netherlands.

94,791. "Bunglo." Metal goods.—Drum Faucet Co., 8th Floor, Wingello House, Angel Place, Sydney, N.S.W.

91,823. "Oxweid." Gas generators.—Union Carbide and Carbon Corporation, 30 East 42nd Street, New York, U.S.A.

95,738. A triangular design with the word "Walter." Ovens and radiators.—Walter & Son Pty. Limited, 84 Dartbrook Road, Auburn, N.S.W.

96,095. "Decoleum." Linoleums and floor coverings.—Michael Nairn & Co. Limited, Victoria Road, Kirkcaldy, Scotland.

96,094. "Dragon." Leather.—Thomas Cook & Company, 204 Clarence Street, Sydney, N.S.W.

95,767. An arrow drawn through the word "Ifix" Adhesive paste.—Davis Gelatine (Australia) Pty. Limited, 247 George Street, Sydney, N.S.W.

96,088. "Kerite." Pens and writing instruments.—Keith William Ritchie, Seven Hills Road, Faulkham Hills, N.S.W.

96,207. A circular design. Oils for lubricating, heating and lighting.—C. C. Wakefield & Company Limited, 46 Grosvenor Street, London, England.

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96,030. "Asbestex." — Rogers Paint & Varnish Company, Rhodes, N.S.W.



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F727/13/2; Macarthur Press Pty. Ltd., F1.616/4/-; Vardon, Price Ltd., F253/6/8; Andrew, Jack, Dyson & Co. Pty. Ltd., F829/6/6;

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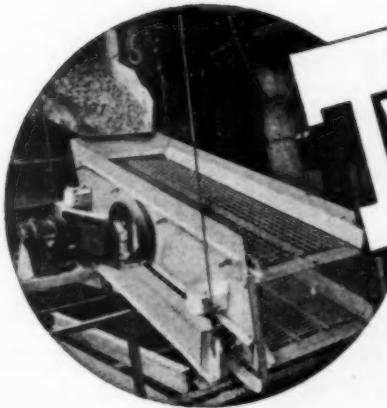
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(Turn to page 84.)

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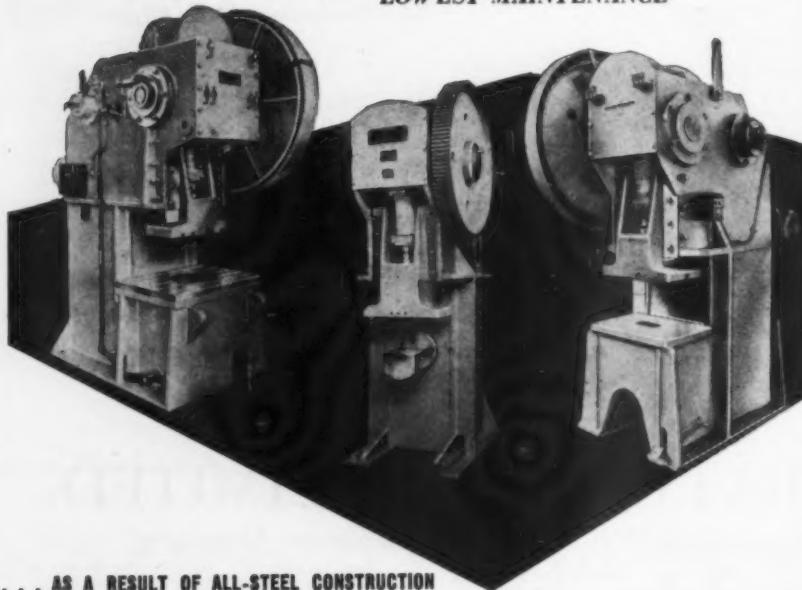


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(Continued from page 62.)

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Manhole Covers and Frames (Sch. No. C.5947). Cockburn & Watson, £2,655.

Automatic Stamp Selling Machine Accessories (Sch. No. C-6239). H. C. Horton, £3,319/11/10.

Lead Covered Switchboard Cable (Sch. No. S.50/698). Gilbert Lodge & Co. Ltd., £845/16/8.

Brass Screws and Copper Rivets (Sch. No. V.287). Repetition Engineering Co. Pty. Ltd., £1,074/8/7.

Steel Racks, Panels and Tables (Sch. No. V.282). Samax Engineering, £257/5/4.

Telegram Conveyor Belting (Sch. No. V.318). Dunlop Rubber (A'sia.) Ltd., £265/19/7.

DEPARTMENT OF WORKS AND HOUSING

Volt Switching Equipment (11,000), for Captain Cook Dock, Sydney. English Electric Co. Ltd., £7,512/10/4.

Cafeteria Equipment, for Chief Telegraph Office. Gardner & Naylor Pty. Ltd., £3,945.

DEPARTMENT OF SUPPLY AND DEVELOPMENT

Trichlorethylene (Req. C.4/161/50). Imperial Chemical Industries of Australia & New Zealand Ltd., £313/5/10.

Football Boots (Req. C.4/203/31). Denzil Don Pty. Ltd., £368/15/4.

Grey Blankets (Req. C.4/267/37). Belmar Weaving Mills, £9,140/12/6.

Finished Unions (Req. C.4/301/61). Ullin Engineering Co. Pty. Ltd., £331/17/6.

Steel Sections (Req. C.4/306/306). Broken Hill Pty. Co. Ltd., £1,423/18/10.

Cartridges, S.A. (Req. C.4/152/19). Imperial Chemical Industries of Australia & New Zealand, £2,608/2/6.

Grey Blankets (Req. C.4/267/37). Daylesford Woollen & Worsted Mills Pty. Ltd., £3,656/5/4.

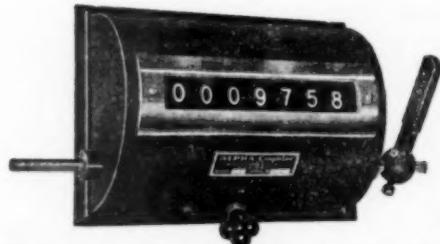
Ball Bearings (Req. C.4/300/25). Gibson, Battle (Melbourne) Pty. Ltd., £225/11/6.

(Turn to page 67.)

REVOLUTION



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CUSTOM MOULDERS IN ALL THERMOPLASTICS

(Continued from page 64.)

Oil Drip Trays (Req. C.4/360/40). Forbo Industries, £326/5/-.

Mild Steel Forgings (Req. C.4/371/307). C. R. Caslake, £324/9/-.

Aluminium Wire (Req. C.4/382/23). Knox, Schlapp Pty. Ltd., £1,400.

Military Khaki Shirts (Req. C.13,770). H. J. Jackson (Tas.) Pty. Ltd., £2,244/18/9.

Electric Dental Units (Req. 716). Electro Dental Mfgs., £1,052/5/-.

Electric Dental Units (Req. 720). Electro Dental Mfgs., £1,515/10/-.

Spare Parts, for Clark Material Handling Equipment (Req. 722). Tutt, Bryant Pty. Ltd., £213/1/9.

Pure D.D.T. Powder (Req. 723). British Paints (Aust.) Pty. Ltd., £27/5/4.

Dried Brown Rice (Req. 725). Australian Rice Pty. Ltd., £1,517/5/8.

Polished Rice (Req. 725). Parsons Bros. & Co. Pty. Ltd., £1,268/15/-.

White Sugar (Req. 726). Colonial Sugar Refining Co. Ltd., £1,244.

Carb Clusters (Req. 732). Essoantene Switchgear Pty. Ltd., £267/5/5.

Folding Canvas Chairs (Req. 734). E. & E. Rostron, £1,550.

Easy Cane Chairs (Req. 734). C. R. Macquire, £227/10/-.

Complete "Cinevox" 16 mm. Sound Film Projectors (Req. 736). Precision Engineering Co. Pty. Ltd., £372/1/2.

Elevating Truck (Req. 737). Norton, Toolitt & Co. Pty. Ltd., £432.

Complete "Tecalemit" V630 Chassis Units (Req. 739). Westcott, Hazell & Co. Ltd., £421/17/8.

Paint (Req. 741). Major Bros., £1,272/3/2; British Paints, £942.

Boilers, for Soyer Stoves (Req. 742). F. G. Kerr & Co. Ltd., £1,770/15/-.

Cylinders and Tooling N.4. **Mark I** (Req. 745). B.E.R.D. Manufacturing Pty. Ltd., £960/4/-.

Non-skid, Deck Paint (Req. 746). Lewis Berger & Sons (Aust.) Pty. Ltd., £1,023/15/-.

Plate Wipers (File No. C.4/267/24). Pioneer Distributors Pty. Ltd., £148/14/5.

Blankets, Cot (File No. C.4/267/29). The Myer Woollen Mills Pty. Ltd., £2,868/15/-.

Motor Vehicle Spare Parts (File No. C.4/302/79). SKF (Baird Bearing Co. (Aust.) Pty. Ltd., £63/5/9).

Steel (A.R. 842). The Eagle & Steel Co. Ltd., £1,117/19/1.

Brushes, Steel Wire (A.R. 845). Manhay Pty. Ltd., £287/10/-.

Plates, Dinner and Tea, Plain (A.R. 849). Parbury, Henty & Co., £235/16/6.

Gardner Compression Ignition Oil Engines (3 No.). (A.R. 850). Ferrier, Dickinson & Weir-Drysdale Ltd., £3,392.

Development of Wireless Stations (A.R. 851). Amalgamated Wireless (A'stasia) Ltd., £2,000.

"Rexpak" (A.R. 854). Basil V. R. Greatrex Pty. Ltd., £277/16/-.

Polish, Floor, Wax (A.R. 862). Flor Sheen Manufacturing Co., £284/7/6.

Contoura & Griffon Engine Cases (A.R. 863). Commonwealth Aircraft Co-op. Pty. Ltd., £909/12/-.

Lint Absorbent and Silk, Oiled (A.R. 813). Greenhalghs Ltd., £500/12/6.

Sterilizers Inst. (A.R. 813). Hecla Electrics (Syd.) Pty. Ltd., £349/8/-.

Wool, Cotton, Absorbent (A.R. 813). Townsend & Mercer (Aust.) Pty. Ltd., £268/9/-.

Dried Brown Rice (A.R. 814). J. F. McKenzie & Co. Pty. Ltd., £883/18/4.

Polished Rice (A.R. 814). Waters Trading Co. Ltd., £993/15/-.

Fabrex Lac-O-Sheen (A.R. 816). Imperial Chemical Indust. of Aust. & N.Z. Ltd., £310/8/4.

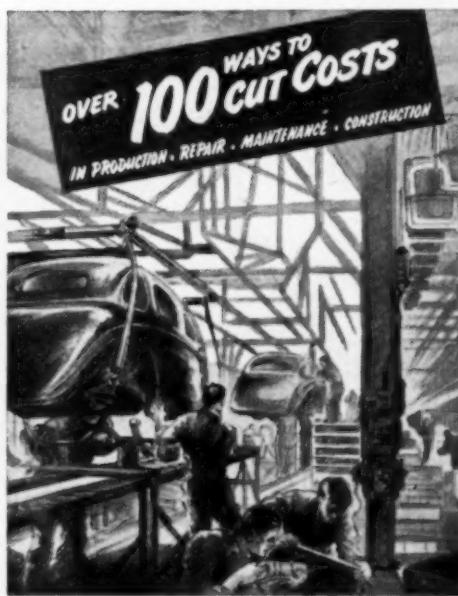
Thornycroft "Nippy" Petrol Engine Chassis (A.R. 822). Thornycroft (Aust.) Pty. Ltd., £3,797/10/-.

Stationery (A.R. 826). Edwards Dunlop & Co. Ltd., £254/8/-.

Stretchers, Wire (A.R. 827). Newlands Bros. Pty. Ltd., £254/8/-.

Oil Baize, 45 in. (A.R. 830). C. C. Rawson Pty. Ltd., £565/10/-.

Cylinder, NL Mark 1. Tinned Plate, Empty (A.R. 831). B.E.R.D. Manufacturing Pty. Ltd., £1,941/8/-.



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Mattresses, Cot, Fibre (A.R. 834). Moonrise Pty. Ltd., £965/16/8.

Raw Linseed Oil (A.R. 835). Harold Meggitt Ltd., £205/16/9.

Oxy Welding Equipment (A.R. 838). Stewarts & Lloyds Pty. Ltd., £498/4/2; Aceweld Welding Co. Ltd., £376/15/6.

Jib Attachments, for Lift Trucks (A.R. 829). Tutt-Bryant (N.S.W.) Ltd., £957/12/-.

Protective Clothing (A.R. 840). Gollin & Co. Ltd., £574/13/8.

Refills, Fire Extinguisher (File No. C.4/165/26). Fire Fighting Equipment Pty. Ltd., £750/15/-.

Vices and Wrenches (File No. C.4/171/53). Motor Parts & Service Ltd., £109/13/4.

Shears, Hand (File No. C.4/171/53). Pauls (Merchants) Pty. Ltd., £67/10/5.

Tweezers (File No. C.4/171/53). McPherson's Ltd., £1,004/6/8.

Tools, Watchmakers' (File No. C.4/171/53). Burnmeister Bros., £93/8/1.

Vices, Bench (File No. C.4/171/53). Hardware Co. of Australia Pty. Ltd., £257/10/-.

Pliers, Various (File No. C.4/171/64). McPherson's Ltd., £98/18/9.

Tachometers, Hand (File No. C.4/171/65). James Walker, £244/17/6.

Mackintoshes, Naval (File No. C.4/262/22). Bak Raincoat Co. Pty. Ltd., £1,974/7/6.

Bunting (File No. C.4/259/68).

M. Morton, £241/10/-.

Tape, Mechanical, Adhesive (File No. C.4/307/126). Johnson & Johnson Pty. Ltd., £61/5/3.

Suits, Overall, Blue (File No. C.12/638). Louis Miller & Co., £940/13/7.

Malt Vinegar (File No. C.4/110/110). Renown & Pearlite Pty. Ltd., £5,479/3/4.

Drills, Twist (File No. C.4/171/41). McPherson's Ltd., £249/14/10; William Adams & Co. Ltd., £87/7/6; Scrutons Pty. Ltd., £131/8/1; Gilbert Lodge & Co. Pty. Ltd., £278/17/1; Eagle & Globe Steel Co. Ltd., £472/17/7.

Plates (File No. C.4/175/146). R. Boyd & Co., £3,246/9/1.

Tracing Cloth (File No. C.4/179/40). W. & G. Dean Pty. Ltd., £67/18/-.

Soap, Common, Laundry (File No. C.4/183/20). Mr. G. W. Penwell, £2,555.

Table, Balze (File No. C.4/268/188). S. Walder Pty. Ltd., £108/8/9; The Gair Manufacturing Co. Pty. Ltd., £457/16/10; Taubmans Pty. Ltd., £681/5/-.

Tube, Washing (File No. C.4/366/122). John R. Bell & Co., £93/15/-.

Colour Cellulose, Glossy White (File No. GS.15.062). British Australian Lead Manufacturers Pty. Ltd., £584/16/8.

Colour Indent, Cellulose, Glossy White (File No. GS.15.201). British Australian Lead Manufacturers Pty. Ltd., £208/13/4.

Bearings of Motor Vehicles (File No. C.4/302/79). Replacement Parts Pty. Ltd., £166/14/-; Bering Service Co. Pty. Ltd., £185/19/2; A. G. Healing Ltd., £1,508/18/-.

Motor Equipment (File No. C.4/304/22). Tecalemit (A'ssia) Pty. Ltd., £1,400.

Stevenson's Screen Legs (File No. C.4/319/3). Progress Engineering Co. Pty. Ltd., £116/16/-.

Arc Welding Plant (File No. C.4/325/5). Stewarts & Lloyds (Australia) Pty. Ltd., £1,755.

Plugs, Fuse Hole, Transit (File No. C.4/350/42). H. R. Everett Pty. Ltd., £560.

Tins (File No. C.4/360/56). Union Can Co. Pty. Ltd., £546/16/6, and £669/1/6.

Spun Copper Boilers (File No. C.4/362/6). John R. Bell & Co., £173/1/3.

Hot Tinning (File No. C.4/362/6). Premier Wire Works Pty. Ltd., £62/10/-.

Soyer Stove Bodies (File No. C.4/368/119). Federal Tinware Manufacturing Pty. Ltd., £778/2/6; F. G. Kerr & Co. Ltd., £3,468/15/-; Metters Ltd., £270/12/6.

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CURRENT TENDERS

NEW TENDERS

The following tenders have been called since our last issue. Current tenders which have been published in previous issues follow this section.

COMMONWEALTH

POSTMASTER-GENERAL'S DEPARTMENT.

Bells and Buzzers (Sch. C. 6352). Sept. 21.

Bimetallic Switch Armatures and Associated Parts (Sch. C. 6356). Sept. 21.

Camp Stools and Tables (Sch. C. 6351). July 25.

Carrier Loading Colls (Sch. C. 6341). July 27.

Identification Tags (Sch. C. 6350). July 25.

Mild Steel (Sch. C. 6345). Aug. 3.

Printed Forms, Telegraph "T.G." Series (Sch. C. 6361). July 20.

Semi Automatic Trunk Exchange Equipment, for Sydney Trunk Exchange (Sch. C. 6205). Extended to Sept. 26.

DEPARTMENT OF WORKS AND HOUSING.

Blankets (2,000), for Works Hostel. July 25.

Combination Wardrobes and Bedside Writing Tables. July 25.

Copper Wash Boilers (300), complete with stands. July 25.

Copper Wash Boilers (120), with doors, grates and dampers. July 25.

Film Inspection Tables (6). July 11.

Metal Chairs (600), stackable type. July 11.

Metal Shelving, for National Library. July 25.

Standardised Office Furniture. July 25.

Transformers (12), 25 KVA. Aug. 9.

NEW SOUTH WALES

DEPARTMENT OF WORKS AND HOUSING.

Diesel Alternator (150 KVA), for Turramurra. July 25.

Kitchen Fittings and Benches. July 18.

GOVERNMENT RAILWAYS DEPARTMENT.

Air Operated Sump Pump (Quot. CE-2861). July 25.

Coal Handling Equipment, for Lake Macquarie Power Station (Spec. 1263). Extended to Aug. 2.

Compression Ignition Oil Engines (19), 500 B.H.P., vertical or vee type, high speed, multi cylinder (Spec. 2205). Aug. 30.

Universal Grinding Machine (Quot. CE-8220). July 27.

FORESTRY COMMISSION.

Air Gauge. July 11.

Drum Bars. July 11.

Folding Stretchers. July 11.

Grindstones. July 11.

Hot Water Cylinder. July 11.

Lightning Arresters. July 11.

Radio Parts. July 11.
Socket Sets. July 11.

DEPARTMENT OF ROAD TRANSPORT AND TRAMWAYS.
Duplex Sewerage Ejector. July 17.

SYDNEY COUNTY COUNCIL.
Aerial Pilot Cable and Accessories (Spec. 1433). July 27.
Low Voltage Bushar Insulators (800), complete with metal fittings. July 21.

Neutral Bushar Insulators, low voltage (500). July 21.

Trailer Caravans (12), two wheels (Spec. 1436). Aug. 3.

Trench Excavators (3), Diesel or petrol engine driven, self propelled (Spec. 1437). Aug. 3.

STATE CONTRACTS CONTROL BOARD.

C.I. Rope Sheaves, mild steel shafting. July 11.
Concrete Pipes, fibro cement fluming. July 10.

(Turn to page 71.)

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NEW TENDERS - Contd.

Electric Clippers, combs and cutters. July 10.

Fire Bars. July 10.

Flue Pipe. July 10.

Grindery. July 11.

Leather. July 11.

Letter Franking Machine. July 12.

Louvres. July 10.

Machinery, for Engineers. July 10.

Mild Steel. July 10.

Plumbers' Supplies. July 11.

Tyres and Tubes. July 10.

Wallpaper. July 10.

MISCELLANEOUS.

Air Break Isolating Switches (77), 33,000 volt., for Newcastle City Council. July 11.

♦ ♦ SEE ALSO ♦ ♦
"LATE OPEN TENDERS"

Electrical Material — Copper Cable, Insulators, Switchgear, Lightning Arresters and Ironmongery, for Municipality of Campbelltown. July 24.

Equipment:—Arc Welding Set (200 amp. welding current); Hydraulic Press (at least 40-ton capacity); Large Pedestal Drill (1½ in. capacity, with electric motor); Large Pedestal Grinder (with electric motor); Steam Cleaning Apparatus; Air Compressor (garage type); Valve Refacer, for Goodradiggle Shire Council. July 17.

Outdoor Static Transformers (3), 250 R.V.A., 11,000/415-240 volt, 3 phase, for St. George County Council. Aug. 1.

Plant:—Grader, powered by International 112 Engine, 8 ft. blade, fitted with Scarifier, weight 7,800 lb., manufactured 1937, running order fair; Crude Oil Roller, 13 tons weight, rear

wheel broken, not in running order; Tar Kettle, 200 gallons capacity, mounted on steel wheels; Fiat Engine, approx. 18 H.P., mounted on Trailer, pneumatic wheels, but not shod. Purchase of, from Shire of Lyndhurst. July 10.

Portable Air Compressor of "one hammer" capacity, trailer mounted on pneumatic tyres, for Municipality of Inverell. July 28.

Pumps, Borehole or Submersible, for Shire of Shoalhaven. Extended to July 24.

Trichlorethylene De-greasing Plant, vapour type, 4 ft. 6 ins. x 3 ft. 6 ins. x 2 ft. 3 ins., for Newcastle City Council. July 14.

VICTORIA

POSTMASTER-GENERAL'S DEPARTMENT.

Fork Lift and Platform Trucks (Sch. V.375). July 25.

Steel Sorting Presses (Sch. V.374). July 25.

Transformer Oil Filtration Plant (Sch. V.368). Aug. 8.

MELBOURNE AND METROPOLITAN TRAMWAYS BOARD.

Brake Shoes, Steel Tyres, solid Steel Wheels, Wheel Centres and Axles (Sch. 32). July 17.

Foundry Equipment, Chemicals, Photographs and Medical Supplies (Sch. 29). July 17.

Glass and Glassware (Sch. 48). July 17.

Paints, Varnishes, Enamels and Paint Shop Sundries (Sch. 27). July 17.

DEPARTMENT OF PUBLIC WORKS.

Electric Hot Water Service, for Tyres. July 18.

Fuel Hot Water Service, for Castlemaine. July 18.

(Turn to page 72.)

Be independent of

POWER SHUT DOWNS



Immediate delivery from stock of auxiliary power plants 16KW to 55KW. Early delivery of other plant up to 1000KW.

BRITISH OIL ENGINES

(A/ASIA) PTY. LTD.

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OUR RANGE covers the manufacture of wire cloth
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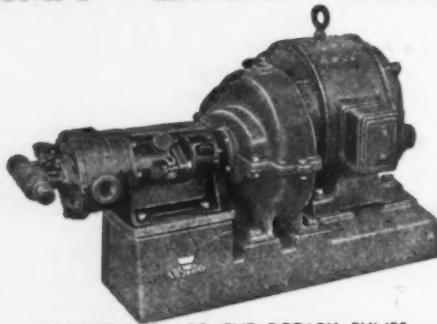
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NEW TENDERS — Contd.

Fuel Hot Water Service, for
Lismore. July 18.

Fuel Hot Water Service, for
Lowry Banks. July 18.

Fuel Hot Water Service, for
Romney. July 18.

Kerosene Hot Water System,
for Drouin. July 11.

Kerosene Hot Water Service,
for Gormandale. July 18.

Kerosene Hot Water Service,
for Metung. July 18.

MELBOURNE HARBOUR TRUST.

C.L. Pile Driving Monkeys (2),
4 ton. July 21.

Draft Proof Windows (6). July
21.

Feed Pumps (6), steam driven.
July 21.

MISCELLANEOUS.

Medium Grader, Powermaster,
Purchase of, from Shire of
Woorayl. July 13.

STATE ELECTRICITY COM- MISSION.

Automatic Telephone Apparatus
(Spec. 50-51/35). Aug. 16.

Belt Conveyor System (Spec.
50-51/4). Extended to Aug. 30.

Control Instruments, for cool-
ing towers (Spec. 50-51/7). Ex-
tended to July 19.

Construction Winches, elect.
driven (Spec. 50-51/37). July 26.

Evaporative Cooling and Warm
Air Heating System (Spec. 50-
51/31). July 26.

Evaporative Cooling and Warm
Air Heating, Lavatory Ventilation
and Hot Water Systems, for
South Melbourne (Spec. 50-51/34).
Aug. 2.

Mobile Cranes (5), 6 ton (Spec.
50-51/17). July 26.

Plates, bucket size, for coal
dredgers (Spec. 50-51/41). July
19.

Transformers (66 kv. and 22
kv.), (Spec. 49-50/3). Sept. 13.

GOVERNMENT RAILWAYS DEPARTMENT.

M.S. Girders, Angle Bracing
and Bedplates. July 19.

Radial Drilling Machine. Aug.
18.

Slotting Machine. Aug. 16.

WEST AUSTRALIA

GOVERNMENT TENDER BOARD.

Caravan, for Forests Depart-
ment. July 20.

Cast Steel Manganese Steel
Crossings, for Railways. Sept. 14.
Centrifugal Pumps (4 inch),
for State Abattoirs. July 13.

Diesel Alternator (5 KVA) Gen.
Set. July 13.

Mild Steel Manholes. July 13.

R.C. Pressure Pipes, for Mt.
Eliza. July 13.

Steel Rivets, for Railways. July
20.

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the world over are continu-
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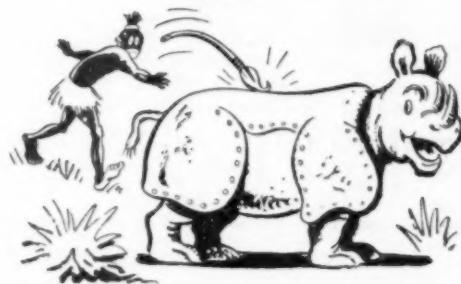
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(Turn to page 74.)

THEY FIT-THEY HOLD



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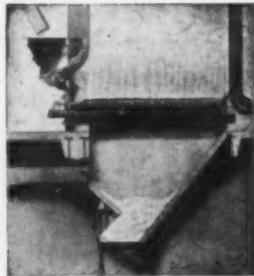
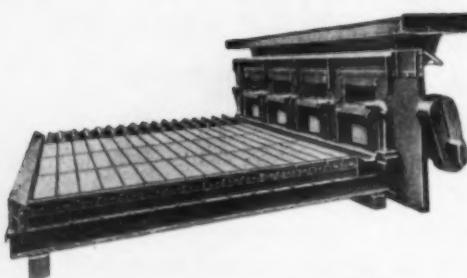
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TOP—Side view of Babcock-Detroit RotoStoker with power dumping grate.

BOTTOM—Sectional view of Babcock-Detroit RotoStoker.



For Medium and Moderate Sized Industrial Installations

The Babcock-Detroit Roto-Stoker is supplied with either hand or mechanically operated dumping grate, and is employed mainly for medium and moderate sized industrial installations.

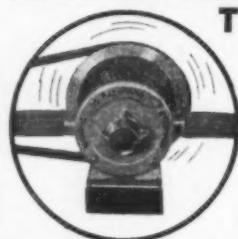
This stoker has been demonstrated as capable of handling a very wide range of fuels, including bituminous, sub-bituminous coals and lignites, brown coal and mixtures of coke and coal.

One of its main advantages is its suitability in plants where the type or quality of coal delivered varies from time to time.

As suppliers of all types of firing equipment, whether for pulverised fuel, oil fuel, other mechanical types of stokers, or any other known firing method, Babcocks have the experience necessary to advise on the right equipment most suitable and economical to your needs.



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BARRY P.D.E., VALLEY
BRISBANE

This MARINO FLEXIVANE PUMP ran continuously for 3,500 HOURS

(except for an inspection at 2020 hrs.)

During this test run the Flexivane received no attention or lubrication whatsoever. The only repair necessary after the inspection at 2020 hours was the gland seal, which was replaced at a cost of 1/3. The performance over this whole exacting test run has been outstanding. The Pump has already given the equivalent of well over 20 years' normal service.

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NEW TENDERS — Contd.

TASMANIA

DEPARTMENT OF WORKS AND HOUSING

Electric Hoist, 40 cwt, fixed and retractable platforms. July 12.

Refuse Incinerator (Item 211). July 12.

P.V.C. Insulated Line Wire (Sch. C.6346). July 20.

Pole Caps (Sch. C.6335). Aug. 31.

Post Office Scales and Weights (Sch. C.6284). July 18.

Plugs and Sockets, for Broadcasting (Sch. C.6328). July 20.

Ringing Equipment (Sch. C.6311). Aug. 1.

Routine Testing Equipment (Sch. C.6281). July 25.

Semi Automatic Trunk Exchange Equipment (Sch. C.6025). Sept. 28.

Switchboards, Cordless (Sch. C.6360). Aug. 17.

Testing Instruments (Insulating Resistances), (Sch. C.6289). July 13.

Tools, Leadworking, Measuring and Miscellaneous (Sch. C.6246). July 20.

Wire Carrier Telephone Equipment, 12 Channel Open (Sch. C.6305). July 27.

CURRENT TENDERS

The following tenders have appeared in previous issues and are still current.

COMMONWEALTH

POSTMASTER-GENERAL'S DEPARTMENT.

Barrettors (Sch. C.6293). July 11.

Beds and Bedding (Sch. C.6349). July 20.

Bi-motional Switch Parts (Sch. C.6344). Sept. 14.

Canvas and Duck, for Mail Bags (Sch. V.6326). Aug. 10.

Carrier Telegraph Equipment (Sch. C.6288). July 20.

Carrier Telephone Equipment (Sch. C.6343). July 13.

Chairs for Telephonists and Telegraphists (Sch. C.6348). July 25.

Communication System between Sydney and Melbourne (Spec. C.8157). Extended to Jan. 18, 1951.

Condensers (Sch. C.6292). July 20.

Lamps, Caps and Sockets (Sch. C.6324). Aug. 15.

Lead Sealers and Parts (Sch. C.6170). Aug. 3.

Loading Coils in Cases (Sch. C.6279). July 13.

Magnetic Type Recorders (Sch. C.6303). July 27.

Mechanically Operated Spring-sets (Sch. C.6323). Aug. 1.

Microphone, Stands, and Cable (Sch. C.6316). Aug. 1.

Morkrum Printer Parts (Sch. C.6285). July 20.

DEPARTMENT OF SUPPLY AND DEVELOPMENT.

Cotton Duck, White. July 11.

Cramp Folder and Bending Machine. July 11.

Gear Generating Machine. July 13.

Hacksawing Machine, 10 inch capacity. July 11.

Radio and Test Equipment. July 11.

Radiosonde Transmitters. July 18.

Steel Die Blocks, Purchase of. July 18.

DEPARTMENT OF WORKS AND HOUSING.

Automatic Fire Sprinkler System, for Woolloomooloo. July 18.

(Turn to page 75)

HARD CHROME PLATING for Building Up DIES, GAUGES, SHAFTS

Woodward & Thurston Pty. Ltd.
208 St. John's Road, GLEBE
SYDNEY, N.S.W.
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Our Dynamic Balancing Service put to work on your Fans, Rotors, Pump Impellers, Centrifuges, Shafts, Pulleys, Armatures, Turbines and Turbine Runners eliminates injurious vibration, provides smooth, efficient operation, prolongs the life of valuable equipment.



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CURRENT TENDERS — contd.

Beer Cooling Equipment, for Parliament House. July 11.
Electrical Materials. July 18.
Hot Water Beticulation, for Canberra. July 11.

STATES

NEW SOUTH WALES

GOVERNMENT RAILWAYS DEPARTMENT.

Ash Conveyors, for Lake Macquarie Power Station (Spec. 1268). Aug. 9.
Automatic Arc Welding Unit (Sch. CE-8130). July 13.
Brick Cutting Machine, complete (Sch. CE-8099). July 19.
Compressed Cork Sheets. July 12.
Corks. July 12.

SPRAY PAINTING

All types of finishing — Lacquer, Enamel, Paint, Flock, Wrinkle, Spatter — done for the Trade.

Specialists in
Stove Enamelling
Ring LA 1437

**J. & F. BROCK
BROS.**
5 INKERMAN STREET
ST. KILDA, VIC.

Drilling Machine, floor stand, motor driven (Sch. CE-8142). July 19.

Dust Collectors (5), for Ultimo Power Station (Spec. 1252). Extended to July 19.

Electric Overhead Travelling Crane (75 ton), (Spec. 804). Sept. 20.

Indoor Type Oil Circuit Breakers, 6,000 volt., 75 M.V.A. for Awaba State Coal Mine Sub-station (Spec. 1266). Aug. 30.

Indoor Type Oil Circuit Breakers, 415 volt, for Awaba State Coal Mine Sub-station (Spec. 1267). Aug. 30.

Lathe, 12 inch centre (Quot. CE-8212). July 31.

Lightning Arresters, distribution type (Quot. CE-8181). July 26.

Metal Band Sawing Machine, Toolmakers (Sch. CE-8083). July 17.

Miscellaneous Electrical Fittings. July 12.

Rectified Units (4,000 KW) and Energy Dissipating Resistor Units (Spec. 1258). Extended to Sept. 6.

Respirators. July 12.

Road Weighbridge, 35 ton, for Conoble. July 26.

Rope, Twine and Cordages. July 12.

Rubber Tyres. July 12.

Tramway Trolley Cord. July 12.

DEPARTMENT OF MAIN ROADS.

Augers and Hydraulic Jacks. July 11.

Bitumen Sprayers, 800-1,000 gall. capacity. July 18.

Petrol Pump and 500 gallon Tank. July 11.

Protection Angles. July 11.

Screening Machinery, for Granville. July 11.

Structural Steelwork, for Granville. Extended to July 11.

METROPOLITAN WATER,
SEWERAGE AND
DRAINAGE BOARD.

Galvanised M.S. Continuous Weld Tubing (90 miles) of various

(Turn to page 76.)

Electroplaters
prefer

GLEAMAX
the superior
BRIGHT NICKEL
process

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Right now is the time to get in touch with Carrier engineers about your prospective heating requirements. Practical suggestions from Carrier's experienced and trained technical staff can mean important savings for you. Types for practically every requirement are available, for high and low pressure steam, hot water or electrical elements.

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CURRENT TENDERS - contd.

sizes and approx. 95,000 galv. M.S.
Tubulars. July 18.

M.S. Electrically Welded
Cement Lined and Coated Fittings. July 11.

Steam Shovel (Excavator), incomplete, rail type, Purchase of July 26.

M.S. Semi-Trailer Transporter Units (22). Extended to July 18.
Transformers (2), 500 KVA, for Warragamba Dam. Aug. 8.

Vertical Spindle Centrifugal Type Pumping Units (2), electrically driven, for Upper Cordeaux. July 25.

SYDNEY COUNTY COUNCIL. Circulating Water Screens self-cleaning, for Pyrmont "B" Power Station (Spec. 1428). July 27.

THE PINNACLE OF ACHIEVEMENT IN AUTOMOTIVE VALVE ENGINEERING



D.E.C. BRAND AUTOMOTIVE
STATIONARY AIRCRAFT

VALVES

Made in Australia from 12% Sichrome
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M.S. Dust Wetting Tanks and
Associated Piping, for Pyrmont
"B" Power Station (Spec. 1428).
July 13.

Metal Clad Neutral Switching
Equipments, 6600 volt, for sub-stations
(Spec. 1418). August 10.

Metal Clad Switchgear (11,000
volt, 250 MVA), for City Sub-station
(Spec. 1382). August 17.

Metal Clad Switchgear (33,000
volt), for Homebush Sub-station (Spec. 1403). Aug. 17.

Motor Driven Vacuum Cleaning
Plant and Piping, fixed type, for
Bunnerong "B" Power Station
(Spec. 1402). Aug. 10.

Oil Immersed Fuse Switches,
11,000 volt. (Spec. 1421). Sept.
28.

(Turn to page 77.)

Chain for all Purposes

Crane and Pulley Block Chain, Coil Chain, Agricultural
Chains, Saddlers' Hardware and Non-skid Chains, etc.
Suppliers of Chain to Government Stores and Railways.

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CURRENT TENDERS — contd.

Outdoor Combined Switches
and Fuses, 11,000 volt, high rupturing
capacity (Spec. 1420). Aug. 31.

Power Transformers (45 MVA),
for Homebush Sub-station (Spec.
1419). Aug. 31.

Precision Lathe, 8 inch swing,
and Accessories (Spec. 1425).
Sept. 7.

Structural Steel Building
Framework, for Induced Draft
Fan Building, for Bunnerong
"B" Power Station (Spec. 1427).
July 20.

Substation Relay Group Equipment,
for City A.C. Network Signal
Equipment (Spec. 1408). Aug.
17.

Vacuum Cleaning Plant, fixed
type, motor driven, for Pyrmont
"B" Power Station (Spec. 1429).
Aug. 10.

Vacuum Cleaning Plant, motor
driven, fixed type, for Pyrmont
"B" Power Station (Spec. 1402).
Aug. 10.

Voltage Cables, high and
medium, for Bunnerong Power
Station (Spec. 1415). Extended to
July 20.

MISCELLANEOUS.

Boiler Feed Pumps, for Clarence
River County Council. July 25.

Cables of various lengths and
sizes, for Shire of Wingecarribee.
July 10.

Diamond Drilling Equipment,
for Snowy Mountains Hydro
Electric Authority. July 18.

Items of Plant—50-60 h.p.
Diesel Tractor, with bulldozer
blade and overhead loader;
Ripper; 4/5 ton Petrol Grader,
self-propelled; Mobile Tar Spraying
Unit and two (2) ton mobile
portable Crane, for City of
Orange. July 17.

Lawn Mower, power driven, 4-
stroke motor, and 18 inch cut, for
Municipality of Tenterfield. July
20.

Plant—Compressor Tractor, of
approx. 100 C.F.M. cap., working
pressure approx. 100 lb. per sq.
inch, pneumatic tired and Tractor
Drawn Road Broom, for Shire
of Wollondilly. July 19.

Plant—Dozers (6), 2-40 h.p., 2-
66 h.p., and 2-80 h.p.; and Low

Loader Float, for City of Greater
Wollongong. July 10.

Plant:—Tractor, fitted with
equipment for loading and dosing,
powered with a Diesel motor
of 26-36 h.p.; Heavy-duty road
grader, approx. 22,000 lbs. powered
with a Diesel engine, 60-100 h.p.
for Shire of Wollondilly. July 17.

Plant:—Tractor, crawler track
type, Diesel engine, about 40-50
drawbar, fitted with equipment,
for loading and dosing; Ripper,
manually controlled, suit above,
for Shire of Mandurah. July 15.

Regulating Valves (37), for
pipe lines and reservoir control,
for Central Tablelands County
Council. July 24.

Transformers, 3 phase, 22,000
volt, for Monaro County Council.
Aug. 5.

VICTORIA

GOVERNMENT RAILWAYS DEPARTMENT.

Control Equipment. August 9.
Pneumatic Concrete Vibrators.
Aug. 9.

Portable Concrete Mixers. Aug.
9.

Salt Glazed Vitrified Stoneware.
July 12.

Sectional Water Tanks and
Towers. July 26.

Supervisory Control Equipment,
Control Desk Key Panels and
Diagram Panels. Aug. 9.

Switches and Bus-Bar Supporting
Insulators. Aug. 2.

Switchgear, 2,200 volt. July 26.

Welding Generators and Machinery,
Second-hand, Purchase of.
July 12.

CITY OF MELBOURNE.

Low Tension Junction Boxes
(Spec. 723/E). Extended to July
24.

DEPARTMENT OF PUBLIC WORKS.

Bio-box Ventilation, for Burn-
ley. July 18.

Fuel Hot Water System, for
Tongala. July 11.

Fuel Hot Water Service, for
Rupanyup. July 11.

(Turn to page 78.)

WEMBLEY

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- Complete Engineering and Manufacturing facilities
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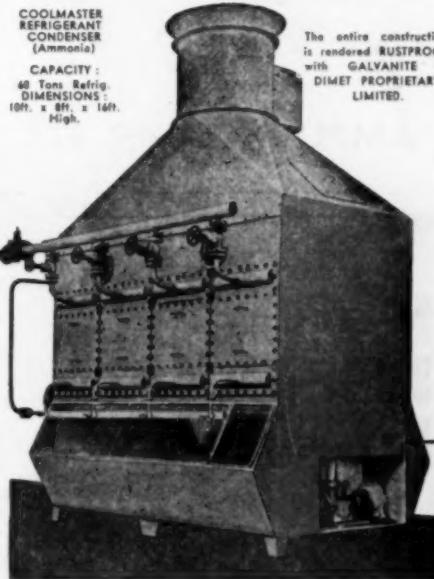
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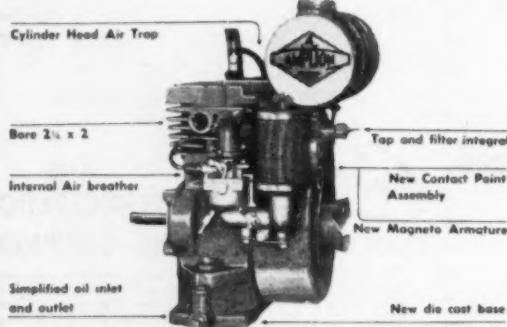
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TAS.: Charles Davis Ltd., 69-74 Elizabeth Street, Hobart.
S.A.: William Adams & Co. Ltd., 187 Waymouth Street, Adelaide.

AT1.10

CURRENT TENDERS — contd.

Hot Water Service, for Ballarat Gaol. July 11.
Sawdust Extraction System, for Footscray. July 18.

**DEPARTMENT OF WORKS
AND HOUSING.**
Oil Burning Installation, for Parkville. Aug. 1.

MELBOURNE AND METROPOLITAN BOARD OF WORKS.
M.S. Plates, Bars and Sections (approx. 956 tons). July 18.

Steel Plate (2,440 tons). Aug. 1.
MELBOURNE HARBOUR TRUST.
Chains, for Dredging Plant. July 14.

POSTMASTER-GENERAL'S DEPARTMENT.
Agricultural Drain Pipes (Sch. V.350). July 11.
Bin Store Units (Sch. V.362). July 11.
Refuse Bins (Sch. V.369). July 25.
Tracked Back Filling Machines (Sch. V.372). July 25.

STATE ELECTRICITY COMMISSION.
Automatic Telephone Apparatus (Spec. 50-51/13). Aug. 2.
Bar Bending and Cropping Machine (Spec. 50-51/23). July 12.
Bucket Links, for Coal Dredgers (Spec. 50-51/36). July 12.
Control Cable, V.R., or P.C.I. (Spec. 50-51/1). Aug. 16.
Indoor Wall Mounting Current Transformers (Spec. 50-51/12). July 19.

Induced Draft Fans, Steel Flues, Dust Eliminators and Structural Steel Housing (Spec. 50-51/5). Aug. 16.
Low Voltage Switch-fuse Combinations, totally enclosed (Spec. 50-51/10). July 19.
O. H. Travelling Crane, electrically operated (Spec. 50-51/18). July 19.
Outdoor Switchgear and Accessories, 60,000 and 22,000 volt. (Spec. 50-51/6). Aug. 16.
Structural Steel Gate (Spec. 50-51/16). July 12.
Switchgear (220,000 volt.) and Accessories (Spec. 49-50/251). Extended to July 26.

Telephone Cable (Spec. 49-50/291). July 12.
Universal Milling Machine (Spec. 50-51/22). July 12.
STATE RIVERS AND WATER SUPPLY COMMISSION.
Lubricating Oils and Greases. July 15.

MISCELLANEOUS.

Centrifugal Pump, 100,000 gals. per hour, for Borough Echuca Water Trust. July 10.

Oil Circuit Breakers, for City of Footscray. Extended to July 17.

Power Grader, approx. 45 h.p. for Shire of Alberton. July 10.

(Turn to page 79.)

FINE GREY IRON CASTINGS OF EVERY DESCRIPTION.

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CURRENT TENDERS - contd.

Pick Up Street Sweeping Machine, for City of Adelaide. July 28.

Road Traffic Control Signal Equipment, for City of Kew. July 11.

Water Filtration and Purification Plant—Floculating and Sludge Scraping Mechanism; Filter Control Valves; Rate Controllers, Indicators, and Connecting Pipework; C.I. Pipes and Fittings, for Treatment Plant Units; Chemical Dry Feeders, etc.; Solution Mixing Equipment, Chlorinator Equipment, etc., for Mildura Urban Water Trust. Extended to July 24.

QUEENSLAND

**GOVERNMENT RAILWAYS
DEPARTMENT.**

Locomotives, Diesel, electric.
July 14.

Machine Tools. July 13.
Rolled Steel Tyres, 4,000. July 20.

**STATE ELECTRICITY COM-
MISSION.**

Alternator, 5.6 KV, 125 KW
(Spec. 194). July 19.

C.I. Pipes and Specials (Spec.
211). July 12.

Concrete Pipes, reinforced
(Spec. 225). July 19.

Control Equipment, for Circu-
lating Water System (Spec. 215).
July 19.

Power House Switchboards
(Spec. 195). Aug. 9.

Steam Piping and Valves (Spec.
229). July 12.

Steam Turbo Alternators (Spec.
200). Aug. 30.

Steam Turbo Alternator (Spec.
196). Aug. 16.

Water Tube Boilers (Spec. 200).
Aug. 30.

MISCELLANEOUS.

Low Voltage Sub-station Equip-
ment, for Townsville Regional
Electricity Board. July 17.

Switchgear (11,000 volt.), for
Townsville Regional Electricity
Board. Aug. 1.

WEST AUSTRALIA

**GOVERNMENT TENDER
BOARD.**

Alternator Unit, oil engine driven.
July 20.

Copper and Steel Conductor.
July 18.

Diesel Mechanical Locomotives
(18). July 20.

Diesel Electric Main Line
Locomotives (48). July 27.

Mild Steel Plate, 4 inch and
3/16 inch. July 13.

Railway Wagons, for Railways
Dept. Sept. 7.

Steam Travelling Cranes. Ex-
tended to July 8.

Steel Rivets, for Railways. July
20.

(Turn to page 80.)

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CURRENT TENDERS - contd.

TASMANIA

HYDRO ELECTRIC COMMISSION.

Automatic Self Closing Valves (5). 90 inch diameter. Aug. 1.

Plant and Equipment:—Conveyor Belt Idlers and Equipment; Conveyor Belts; Vibrating Screens and Electric Motor Driven Concrete Pump. July 28.

MISCELLANEOUS.

Miscellaneous Piping; Cast Iron, Asbestos Cement, or Mild Steel Pipes, for the Trunk Mains; Valves for Trunk Mains; Cast Iron Pipe Specials for Main from

Lindisfarne to Bellerive; Cast Iron or Asbestos Cement Pipes for Lindisfarne, Montague Bay, and Bellerive Reticulation; Valves for Reticulation Mains at Lindisfarne, Bellerive, and Montague Bay; Cast Iron Pipe Specials for Lindisfarne, Montague Bay, and Bellerive Reticulation, for Municipality of Clarence. Aug. 21.

Tractors and Angledozers, with Twin Power Control Units, for City of Launceston. July 17.

**NOW MANAGING DIRECTOR
OF CYCLONE.**

Mr. Reginald S. Chambers, who was previously general manager, has been appointed managing

director of Cyclone Co. of Aust. Ltd. Mr. Leonard S. Chambers, the company's chief technical officer, has been appointed Technical Director.

Late Open Tenders

COMMONWEALTH

DEPARTMENT OF SUPPLY.

Blackboards, Easels and Easel Pegs. July 20.
Bren Chests. July 20.
Capstan Lathes. July 18.
Gauges. July 20.
Machine Tool Accessories. July 25.

NEW SOUTH WALES

**METROPOLITAN WATER,
SEWERAGE AND
DRAINAGE BOARD.**

Automatic Inlet Control Valve, with control mechanism. Extended to Aug. 15.

Pre-cast R.C. Columns, Beams and Slabs. Aug. 1.

**GOVERNMENT RAILWAYS
DEPARTMENT.**

Air Brake Hose Pipe. July 19.
Axle Oil, for car and waggons. Aug. 2.

(Turn to page 81.)



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LATE OPEN TENDERS—Contd.

Bearing Oil, for Locomotives.

Aug. 2.

Electrical Cells, Batteries and Fittings. July 19.

Electrical Fittings. July 19.

Galvanising. July 19.

Locomotive Cylinder Oil. Aug. 2.

Mineral Turpentine. July 19.

Rubber Stamps, etc. July 19.

Telephone and Fittings. Aug. 2.

SYDNEY COUNTY COUNCIL.

Airbreak Isolating Switches, for support insulators (Spec. 1386), Extended to July 20.

DEPARTMENT OF MAIN ROADS.

Asbestos Cement Moulds. July 13.

Balance. July 13.

Cistern, Copper or Brass. July 13.

Concrete Pipes. July 13.

Crushing Plants. July 15.

Excavators. July 15.

Gully Grates and Frames. July 13.

Lightning Set, Diesel driven.

July 13.

Metallic Tubing, flexible. July 13.

Rotary Drill, pneumatic. July 13.

Screw Connectors. July 11.

Time Recording Clocks, automatic graph type. July 13.

Tungsten Carbide Bits. July 13.

MISCELLANEOUS.

Overhead Type Loader, prefer pneumatic tyres, for Municipality of Wingham. July 26.

Speed Patrol Grader, Purchase of, from Municipality of Wingham. July 22.

VICTORIA

STATE RIVERS AND WATER SUPPLY COMMISSION.

Diesel Engine (30 h.p.), Compression Ignition Type. July 18.

SOUTH AUSTRALIA

GOVERNMENT RAILWAYS DEPARTMENT.

Steel Freight Containers (54). July 27.

SUPPLY AND TENDER BOARD.

Galvanised Iron, Corrugated, 130 tons; flat, 20 tons. July 31.

Planing and Moulding Machine, 6 headed T.E. July 24.

Steel Sleepers, 100,000; Bolts and Nuts, 400,000; Spring Washers and Cast Steel Clips, 400,000 of each. July 24.

ADELAIDE CITY COUNCIL.

Pick Up Street Sweeping Machine. July 28.

DEPARTMENT OF RAILWAYS—NEW SOUTH WALES.

TENDERS enclosed in sealed envelopes which must be endorsed "TENDER FOR . . .", addressed to the Commissioner for Railways, 10 York Street, Sydney, will be received on the dates and times shown for service specified. Tenders may be lodged in the Tender Box, Room 504A, 5th Floor, Railway House, 10 York Street, Sydney, or posted to the above address.

Wednesday, 2nd August—
12 noon.

(Extended from 8th July.)

For the manufacture, supply, delivery and erection of Coal-handling Equipment for Lake Macquarie Power Station, to Specification No. 1263. Tender Forms (Specifications, price 5/- each) and further particulars obtainable from Chief Electrical Engineer, 10 York Street, Sydney.

Wednesday, 30th August—
12 noon.

For the supply and delivery of ten (10) 500 B.H.P. Vertical or Vee Type High Speed Multi-Cylinder Compression Ignition Oil Engines, in accordance with Specification No. 2205. Tender Forms, Specifications, and Conditions of Contract, at standard charges, obtainable from Chief Mechanical Engineer, Room 202, 19 York Street, Sydney. Telephone: M 4401, Ext. 889.

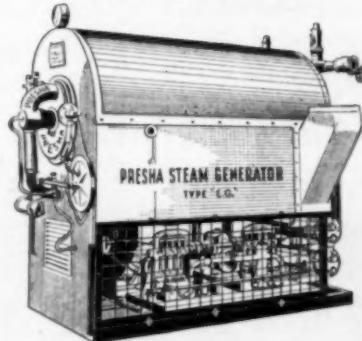
No tenders necessarily accepted. Make cheques payable to Commissioner for Railways. Any tender unaccompanied by deposit as provided in conditions of contract may be rejected.

S. R. NICHOLAS,
Secretary for Railways.

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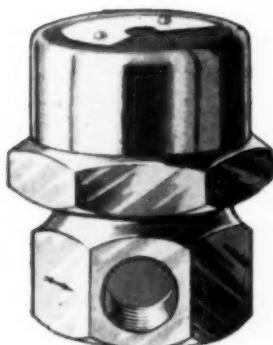
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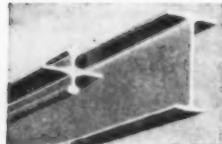
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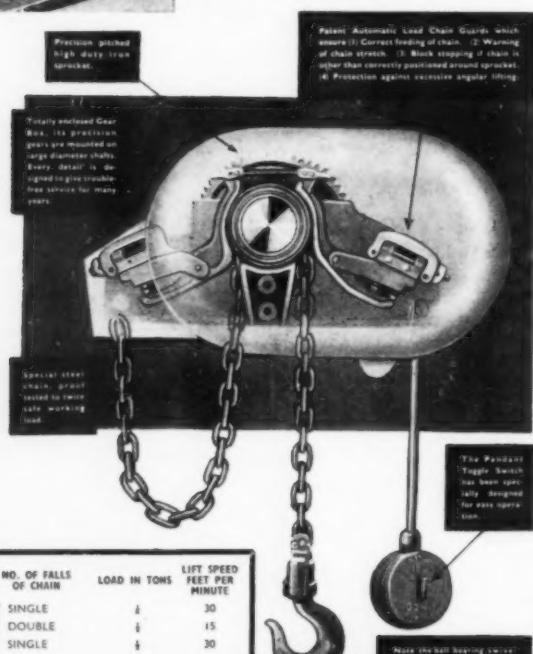
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At left is shown two types of "King" track used—"Double-bead" Track, ideal for light loads; and "Supertrack" for moderate loads. Below is a "King" Electric Chain Block cutaway to show some of the outstanding features for which it is renowned.



NO. OF FALLS OF CHAIN	LOAD IN TONS	LIFT SPEED FEET PER MINUTE
SINGLE	8	30
DOUBLE	8	15
SINGLE	8	30
DOUBLE	8	15
SINGLE	8	30
DOUBLE	2	15
SINGLE	2½	30
DOUBLE	5	15
TRIPLE	7½	10
QUADRUPLE	10	7½

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